OCTOBER, 1953

Industrial FINISHING

Published Monthly in the Interest of Product Cleaning and Painting by Practical Publications, Inc., 1142 N. Meridian Street, Indianapolis 4, Ind.

STURLON®
can give your product new sales features

ABRASION-RESISTANT

Independent laboratory tests show STURLON has a resistance to abrasion many times greater than that of other metal finishes.

EXTRA FILM THICKNESS

Due to its extra film thickness, STURLON makes metal more static-resistant . . . warm and pleasant to the touch . . . gives light metal a heavy metal sound.

NON-CORROSIVE

STURLON is unaffected by moisture, salt air, humidity or temperature changes.

NON-FADING

Independent laboratory tests show no apparent color changes in STURLON, even after 370 hours in the Fadeometer.

MADE ONLY BY ADVANCE

STURLON is made only by Advance Paint Company, and is now available in most colors. Write for details.

Advance PAINT COMPANY
Indianapolis Indiana
MANUFACTURERS OF INDUSTRIAL FINISHES

STARRING

PALADIN

the Versatile Primer

AFTER FIFTEEN YEARS...

This old trouper still packs 'em in *because*, with such a talented performer, the show HAS to be good.

PALADIN PERFORMS A GRIPPING ACT

CO-STARRING

Aluminum	Melamine Plastics
Brass	Nickel
Bronze	Phenolic Plastics
Cadmium	Polished Chromium
Copper	Stainless Steel
Glass	Zinc
Magnesium	Zinc Die Castings

AND FEATURING

- Air-dry or low-bake schedules.
- Compatibility with lacquer, air-dry or baking enamel, chlorinated rubber or vinyl top coats.
- Available for new bookings through your nearest.

IC FINISHES SPECIALIST

Interchemical Corporation

Finishes Division

FACTORIES: CHICAGO, ILL • CINCINNATI, OHIO • ELIZABETH, N. J. LOS ANGELES, CAL. • NEWARK, N. J.

Another example of Bede leadership

BEDE AIRLESS PAINT SPRAYING SYSTEM

This advertisement announces the first of three major new developments for the paint industry.

The most important development in the history of paint application

Now . . . obtain better coverage with less time, labor, and material, even over surface irregularities and foreign matter

Now . . . reduce paint loss due to overspray, and dispense with elaborate booths

Now . . . eliminate paint rebound into sprayer's face

Here is a revolutionary approach to industrial finishing, so far ahead in its field, so moderately priced, so easy to use, it is destined to swiftly outmode other paint application methods.

A new principle, harnessing *heat* and *hydraulic pressure*, results in *complete* atomization. No compressed air is used. With specially designed, patented equipment, paint is siphoned from container into the system by electrically driven hydraulic pump, sent through a heater, to a new, light-weight spray gun, where volume and angle is controlled by selection of nozzle.

Patent Pending

EASY TO INSTALL

SAVE MONEY! . . INCREASE YOUR PRODUCTIVE OUTPUT!

For informative literature, contact your local Bede distributor, or

BEDE PRODUCTS Inc.

Industrial Finishing Equipment

1100 Brookpark Road, Cleveland 9, Ohio • Telephone ONtario 1-9400

finish . . . a specialized part of informal pine designs by HABITANT

The apparent simplicity of Habitant furniture is deceiving, for both design and finish are the result of specialized experience. The finish, for example, creates the subtle tones desired without detracting from the natural appearance of the knotty pine. It also provides protection against the hard usage invited by Habitant's informality. Smokey Pine and Autumn Pine finishes were custom-created in our studios to meet this specialized need.

The better the finish, the better the buy

GRAND RAPIDS VARNISH CORPORATION

GRAND RAPIDS, MICHIGAN

Makers of the Famous Guardsman Finish and Guardsman Cleaning Polish

OCTOBER, 1953
Vol. XXIX, No. 12

CCA

A monthly magazine for finishing room and paint shop foremen, production superintendents, chemists, purchasing agents and company executives of industrial plants where product surface cleaning and finishing are major operations in the manufacture of parts and products.

Industrial FINISHING

W. H. ROHR, Editor P. C. BARDIN, Associate Editor

Contents

Random Comment on the Industrial Scene 4
Painting McCulloch Engines 22
How We Prepare and Paint Metal Furniture 30
Spray Gun Efficiency 42
Let's Face Facts...Are You Prepared for a FIRE? 54
Letters from Readers 74
Questions and Answers 84
Materials; Supplies; Equipment 88
Booklets; Circulars; Catalogs 106
Editorial 112
Classified Advertising Department 124
Advertisers Index 127

Lacquer Information Center at Paint Industries Show 38
C. A. Windsor Joins Michigan Oven Co. at Detroit 50
Special Course in Finishing Offered at Northeastern 68
R. Offringa Joins Ransburg Electro-Coating Corp. 68
Custom Spraying: Special Spray Gun Adjustments 69
How Much Should You Know About Materials? 70
Sherwin-Williams Industrial Men Met in Chicago in September 70
NACE to Meet at Birmingham 102
John Rowe is Appointed V. P. of Binks Mfg. Co. 118
R. E. Sagendorf Advanced in Detrex Corporation 118
Solvent Lab. Protected by Automatic Fire Ex. 120
J. T. Lester, Southwest Mgr. of Devoe & Raynolds Co. 121
Kelly Joins Cosden Paint Co. 122
C. R. Anderson Personnel Man for Rinshed-Mason Co. 122
SPPA Convention Nov. 1-4 in New York City 122
Schaefer Opens New Office and Studio in Salamanca 123
Little Opens Office in Chicago 123
Adsit Joins Central Solvents 123

Published
the 18th of each month by
PRACTICAL PUBLICATIONS
Incorporated
1142 N. Meridian St.
Indianapolis 4, Ind.
Telephone Plaza 6771

President.....W. H. Rohr
Vice-President.....E. A. Dosch
Sec.-Treas.....R. E. Salts

★

Eastern Representative:
C. A. LARSON
254 West 31st St.
New York 1, N. Y.
Phone: Longacre 4-4285
4-4286

West Coast Representatives:
SIMPSON-REILLY LTD.
Halliburton Building
Los Angeles 17, Calif.
Telephone: Dunkirk 8-1179
814 Central Tower
San Francisco 3, Calif.
Telephone: Douglas 2-4994

★

Subscription Rates Per Year
U. S. and Possessions.....$3.00
Canada and Foreign Countries.....$5.00

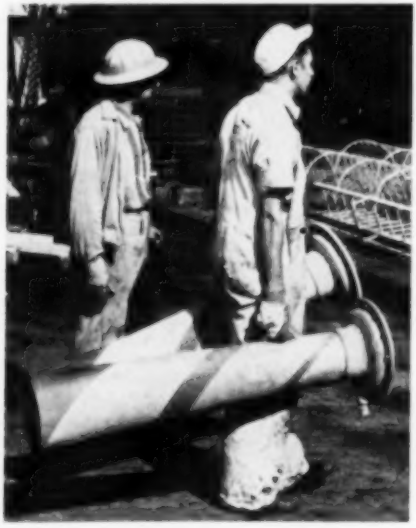
Acceptance under Section 34.64, P. L. & R., authorized

29 TWENTY-NINTH YEAR OF PUBLICATION

Portable Air Mover. Do you have a problem in ventilation in some of the close places around the plant? Perhaps it is only a temporary condition such as cleaning, brushing or painting closed-in places, basements or plant ceilings.

The air mover (see illustration) to function requires that compressed air be introduced through the base and discharged at high velocity from the outlet horn. This induces air movement in large volume.

Some of these air movers have a rated capacity of 3150-cu.ft. per minute at 70-lbs. compressed air pressure. One of these air movers weighs only 31-lbs., therefore it is easy to handle and set up where needed.



A painter carries two of the air movers to a new job, for on-the-spot ventilation.

* * *

Ready for Winter? Last call for those outside repairs to roofs, concrete drives, walls, caulking around openings, repairing the parking area, clean-up and paint-up. If it hasn't been completed, October is the time to get the job done before the cold rains and snows arrive. October is a month for doing—but there isn't much of it left.

* * *

Paint Sales High. July dollar sales for the paint, varnish and lacquer industry, as reported by the Bureau of the Census, totaled $124,704,000. This is an increase of 13.4% over July, 1952, and a new record for the month.

The increase represents the largest percentage gain for any month of this year as compared to last year. Trade sales for July were $76,153,000, an increase of 4½% over July of 1952.

Industrial sales, totaling $48,551,000, were 31% over a year ago.

Total sales for the first seven months of this year are $853,554,000, a gain of almost 6% over the comparable period last year of $806,205,000.

Trade sales for the year to date are $513,253,000, just under the 1952 seven months' total of $513,484,000. In

We Repeat *Again and Again and AGAIN!*

There is **no** better value **anywhere** for quality finishing than

No. 1450 PERMANENT WATER WHITE Lacquer
No. 1545 PERMANENT WATER WHITE Sealer

For those new, modern, light transparent finishes

or

No. 8800 HI-SOLIDS Lacquer (over 32%)
No. 1830 COMPANION SEALER

For full bodied, regular tones, used in conjunction with

DOLAN'S STAIN-FILL or TONE-FILL

THEIR REASONABLE PRICES WILL SURPRISE YOU!!!

Drums of each will be shipped, with a positive guarantee that you will find them **better** values than your present products or you may return the unused portion for **full** credit.

V. J. DOLAN & COMPANY, INC.

Manufacturers of "Unquestionable Quality"
INDUSTRIAL FINISHES
1830 N. Laramie Avenue Chicago 39, Ill.
Berkshire 7-0100

FUNCTIONAL FINISHES ! !

If you require your coatings to accomplish some specific task—something beyond mere ornamental appearance or average longevity—

TRY US!

We make ACRYLIC, ALKYD, CELLULOSIC and VINYLOID coatings for a very wide range of specialized industrial applications.

THE VARNISH PRODUCTS COMPANY
5206 Harvard Avenue **Cleveland, Ohio**

NON-INJURIOUS **ELECTRO** **NON-INFLAMMABLE**

COLD STRIPPER

FASTEST *in Action* **LOWEST** *in Price*

WRITE FOR TESTING SAMPLE OR ORDER
5-GALLONS AT DRUM PRICE

Specify whether dip or brush type is desired

Allied Finishing Specialties Co.
2641 W. Grand Ave. • **Chicago 12, Illinois**

recent months trade sales have overcome their first quarter lag and now indicate that they will exceed the previous year when August figures are released.

Industrial sales for the year to date are $340,301,000, an increase of 16% over the comparable 1952 total of $292,721,000.

July sales were slightly under the June sales, which is traditional with the industry, but the outlook for another record-breaking year, in dollar volume, appears excellent.

* * *

Light Watchman is the name of an electric eye device that automatically turns on one or a group of electric lights as darkness approaches, and turns them off at dawn. This should prove economical as well as handy to control safety lights on stairways, corridors and remote warehouses.

* * *

Water, a Paint Solvent. The new water-soluble synthetic resin called Hdrophen, is used to make a coating designed for use on automobiles, farm machinery and other durable goods fabricated from metal.

The material is a placticized phenolic resin which takes strong colors, but not pastel tints. It will also be made available in clear. Additional research is being made.

The new resin is made of phenol alcohol synthetized from carbolic acid, formaldehyde which confers hardness and abrasion resistant qualities, an alkyd resin which gives flexibility, and ammonia which reacts with the alkyd to make the material water soluble. Other alkalis could be used, but these would have to be added at the point of application as the addition causes product to lose its stability and limit its useful life to no more than two or three weeks.

After application the water is al-

Are You In A Stew?

About Rising Prices

LET **POTTER**

Save You Money on

THINNERS

POTTER can deliver high quality THINNERS at lowest prices because we are **specialists,** making only thinners.

Here's how it's done:

- Specialization—for over 28 years
- Large Sales Volume
- Streamlined Overhead
- Solvent bought in tank car lots only

Over 600 satisfied users

POTTER'S THINNERS are EASY TO TEST. Just mix with your lacquer in regular way and observe results. If it mixes all right and dries all right —it is all right.

With our method of blending solvents, we can easily "Tailor Make" special thinners for difficult applications. Whether you need a special thinner or a regular Potter product—**we can save you money. Mail this Coupon, today!**

POTTER PAINT CO., INC.

CORTLAND 1, N. Y.

THINNER SPECIALISTS

The product we make is:_____

We use Lacquer Thinner for:

☐ Spray ☐ Dip ☐ Cleaning ☐ Other_____

We use Lacquer Thinner on:

☐ Metal ☐ Wood ☐ Other_____

We want it to dry:

☐ Fast ☐ Slow ☐ Medium

Name_____

Address_____

City_____ Zone____ State_____

WITH THIS
ONE COAT WHITE

For all their bubble and sizzle, soaps and detergents fizzle when it comes to affecting Sea-Lac's **ONE COAT WHITE**. This is the one WHITE that has unfazable resistance to the action of soaps and detergents. Bakes in 35 to 45 minutes at 300° F. Has good flexibility and mar-resistance. Can be used with primer, if desired.

SEA-LAC

DURALAC CHEMICAL CORP.
84 LISTER AVE., NEWARK, N. J.

lowed to evaporate, then the finish is baked in an oven. The resulting finish is said to be water resistant, weatherproof, resistant to oils, corrosion and solvents. It has sufficient flexibility for after finish deep pressing and stamping without injury.

* * *

A Worlds Fair is planned to be in Houston, Texas, in 1956. It will be "the greatest World's Fair ever staged anywhere," according to S. Wendell Hawkins, president of Greer, Hawkins & Allen, the agency named to handle advertising. Walter W. Cameron, formerly president of Houston University, resigned that post to head the 1956 Houston Worlds Fair, Inc. The event will be a non-profit venture financed by a 16 million dollar bond issue. The Fair will occupy more than 1000 acres of land near San Jacinto State Park.

* * *

Safety Step Ladder. Precision Equipment Co. announces production of all steel "automatic action" safety step ladders. The ladder can be easily rolled to position but as soon as someone steps onto it the casters automatically disengage making the ladder immoveable. Rubber tipped legs "lock" to the floor, providing a firm, sure base. When a person steps off the ladder the casters instantly and automatically re-engage.

Aluminum-finished steel is used throughout in their construction. Frames are ¾-in. steel tubing. Reinforced expanded steel make up the non-slip step plates. The larger four and six step models are furnished with handrails.

* * *

Plastic Wall Sheeting. Color that can't be touched or damaged is the feature of a new embossed plastic wall covering just announced by United States Plywood Corp. The material

(Continued on page 104)

SPRUANCE IS IN THE LACQUER BUSINESS

We have been supplying the furniture trade and the makers of television cabinets finishing materials from the bare wood to the final operation.

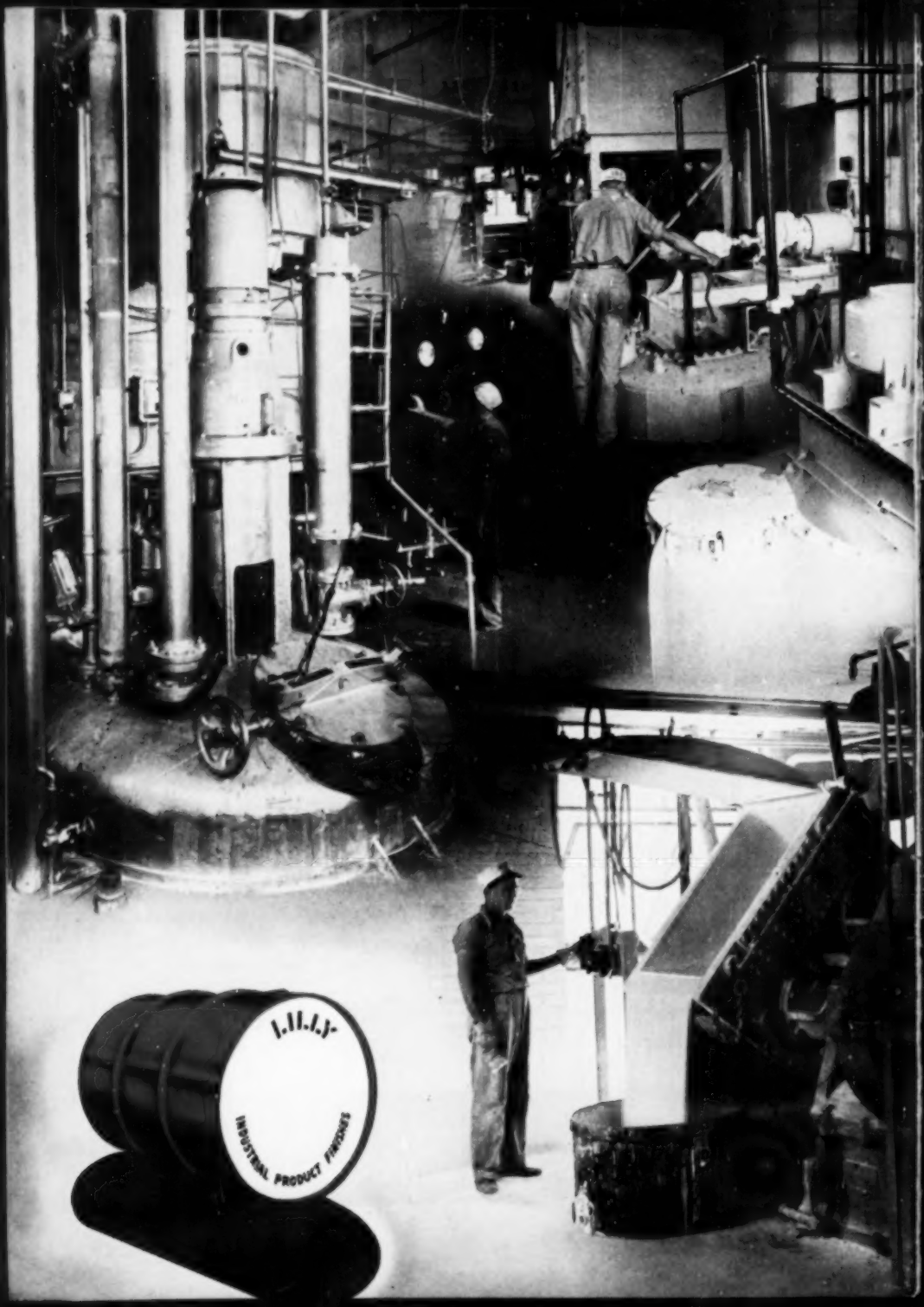
One of our specialties is Water White Lacquer considered by many to be the finest ever made. If you are interested in the blond type finishes so popular today, we have a water white lacquer and a companion sealer to meet the most exacting specifications.

Our lacquers are formulated to rub. They will withstand cold checking. They are durable and tough. If you want one that is alcohol resistant we can make it. Anything in lacquer — Spruance can make it. When you think of lacquer, think of Spruance.

SPRUANCE IS IN THE LACQUER BUSINESS

THE GILBERT SPRUANCE COMPANY

PHILADELPHIA 34, PA. • WINSTON-SALEM, N. C.


I.I.I.I.
INDUSTRIAL PRODUCT FINISHES

"Coatings by Lilly"

COSCO Products, found in homes and offices all over the nation, rely upon Lilly Coatings to maintain their top-quality construction . . . durability . . . and striking appearance.

All products manufactured by Hamilton Manufacturing Corporation, Columbus, Indiana, carry the nationally-advertised—and widely accepted—trade name, Cosco. The complete line includes 30 various models of metal household stools, utility tables and carts, juvenile furniture, as well as Cosco metal office chairs. The famous Cosco stool, shown here, is the big leader in the Household Line.

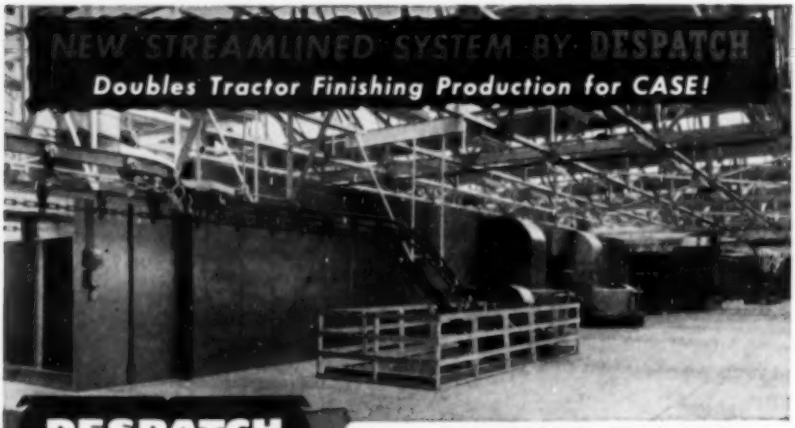
Beauty and Utility Go Hand-in-Hand

In the Household Line, there are 6 gay colors designed to harmonize with any kitchen decorating scheme. Cosco Office Chairs are available in pleasing shades of gray, brown or green. All coatings on enameled parts—both dipped and those electrostatically sprayed—are by Lilly. Another example of Lilly Industrial Product Finishes at work for industry.

Lilly VARNISH COMPANY
666 S. CALIFORNIA STREET
INDIANAPOLIS, INDIANA

Serving industry with all types of product finishes and coatings:
VARNISHES • LACQUERS • ENAMELS
METAL LITHO COATINGS • STAIN and WOOD FILLERS

Affiliated companies at High Point, North Carolina and Gardner, Massachusetts



DESPATCH

A FINISHED TRACTOR *every 5 minutes!*

Tractor finishing at the J. I. Case plant, Rock Island, Ill., has been doubled and quality of finish raised to a new high with this modern finishing system designed, built and installed by Despatch. Housed in a new, well lighted building the system is giving Case tractors a rich, durable baked on finish in the familiar Case Flambeau Red. The operation includes washing, painting and finish baking.

1. 600-ft. continuous conveyor enters 3-stage washer where tractor gets a 160° F. phosphate wash, cold water mist bath, and 180° F. hot water rinse.
2. Tractors are spray painted in staggered water wash booths. Paint is heated to 170° F. —eliminates need for thinner and allows closer spraying to cut down overspray.
3. A lasting, weather resistant finish is baked on at 225° F. in this 96-ft. oven heated by steam from the Case central steam plant. Emerging from the oven, tires and other accessories are added.

Let Despatch Modernize Your Finishing Operations

Replace your obsolete finishing system with a modern Despatch system engineered to fit your needs. Increased production, higher quality and lower costs will result.

Write, wire or call Dept. E for details.

DESPATCH OVEN COMPANY

Minneapolis Office: 619 S. E. 8th Street

Chicago Office: 4554 N. Broadway

Sales Offices in all Principal Cities

Special Coatings are Standard with Us!

If you have an industrial finishing job that requires a special coating, call on us! We'll tailor the Pitt Chem coating to meet your exact specifications . . . to provide the durability, appearance and special properties you need. A call from you today will place an experienced Pitt Chem coating consultant at your immediate service. Phone, wire or write . . . now!

- ★ Alkyd Coatings
- ★ Vinyl Coatings
- ★ Phenolic Coatings
- ★ Epoxy Coatings

W&O 4639

Protective Coatings Division

PITTSBURGH COKE & CHEMICAL CO.

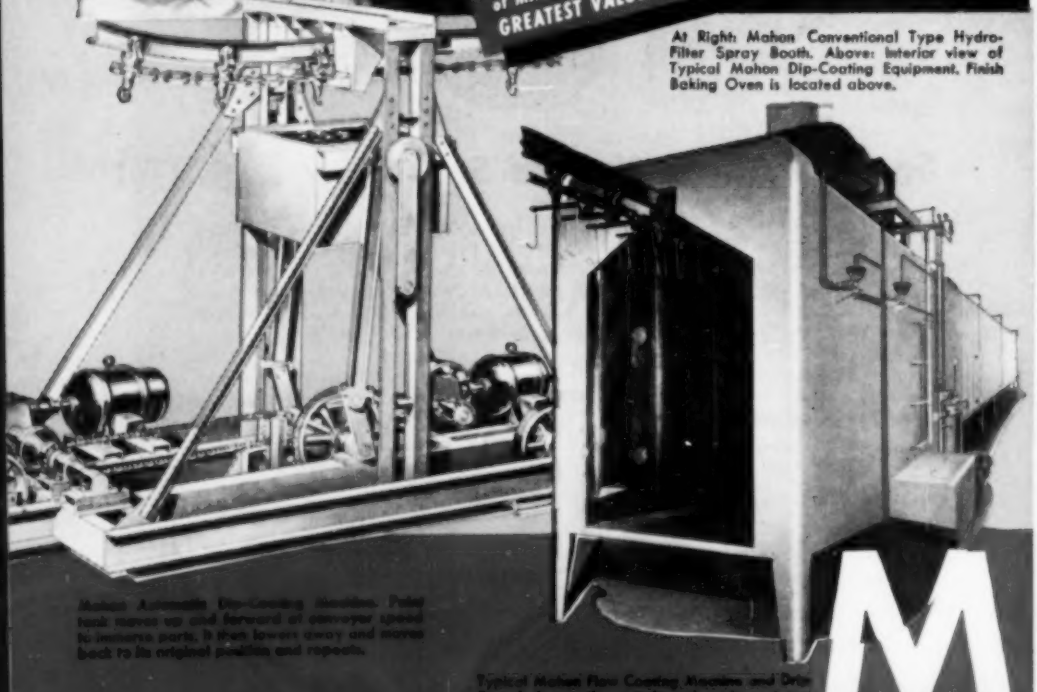
GRANT BUILDING • PITTSBURGH 19, PA.

Coal Chemicals • Agricultural Chemicals • Fine Chemicals • Protective Coatings • Plasticizers • Activated Carbon • Coke • Cement • Pig Iron

COMPLET

. . . . . the **EXPERIENCE** that goes into the **PLANNING** and **ENGINEERING** of **MAHON EQUIPMENT** is the item of **GREATEST VALUE to YOU!**

At Right: Mahon Conventional Type Hydro-Filter Spray Booth. **Above:** Interior view of Typical Mahon Dip-Coating Equipment. Finish Baking Oven is located above.



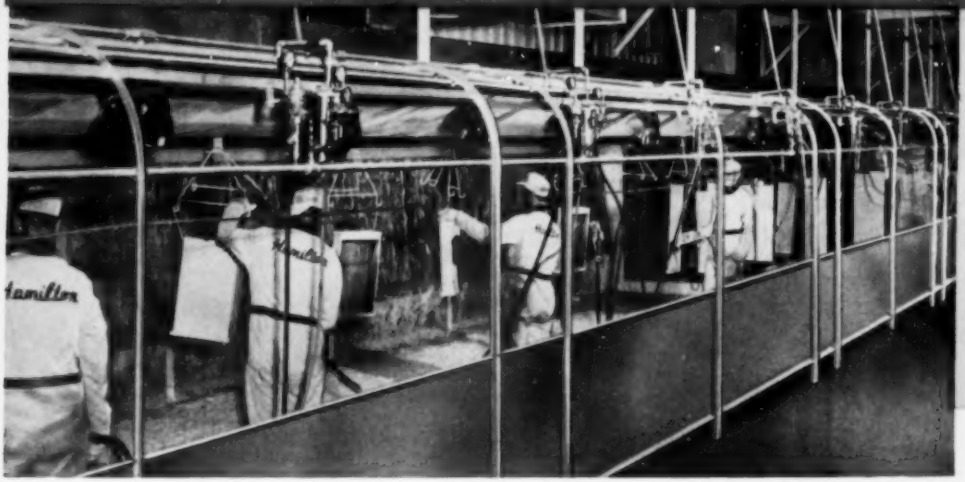
Mahon Automatic Dip-Coating Machine. Paint tank moves up and forward at conveyor speed to immerse parts. It then lowers away and moves back to its original position and repeats.

Typical Mahon Flow Coating Machine and Drip Tunnel. Automatic controls and equipment can be provided to maintain coating material at a constant temperature.

M

E Finishing SYSTEMS

. . . for ENAMELS • LACQUER • PAINT • VARNISH



Should YOUR PRODUCT be SPRAYED, DIPPED or FLOW COATED? or does it demand a COMBINATION of these COATING METHODS?

In some plants, where our advice on finishing methods has been sought, we have found parts being flow coated when substantial savings could have been effected in the over-all finishing costs through the employment of the dip method—savings in thinner, paint, initial cost of equipment and maintenance . . . and the dip method, in this particular operation would have provided a better finish with fewer rejections. It is therefore wise to get expert advice when confronted with a finishing problem, regardless of what the part or product may be. Many factors enter into the basic and all-important decision on method or combination of methods to be employed to produce the finest results at the lowest possible unit cost. Mahon engineers, with a background history covering thousands of complete finishing systems—including Dip, Flow Coating and Spray Equipment—are in a position to make sound, unbiased recommendations on the "HOW" to finish any product under any conditions or production requirements. Over thirty years of experience in planning, designing, building and installing finishing systems of every type for every conceivable product painted on a production basis, has equipped Mahon engineers with a wealth of technical knowledge and practical know-how not available elsewhere . . . can you afford to rely on less? See Mahon's Insert in Sweet's Plant Engineering File, or write for Catalog A-654.

THE R. C. MAHON COMPANY • Detroit 34, Michigan • Chicago 4, Illinois

Engineers and Manufacturers of Complete Finishing Systems—including Metal Cleaning, Pickling, and Rust Proofing Equipment, Hydro-Filter Spray Booths, Dip and Flow Coaters, Filtered Air Supply Systems, and Drying and Baking Ovens; Core Ovens, Heat Treating and Quenching Equipment for Aluminum and Magnesium, and other units of Special Production Equipment.

AHON

It's practically

WATER-WHITE

a NEW chemically resistant baking finish—

DURACHEM

For all types of metal products from heavy hardware to fine jewelry

Here is a new baking type synthetic finish for metal parts that combines unusual clarity with a high degree of chemical resistance.

Product of Maas & Waldstein Co. research, DURACHEM is almost water-white in color—and retains its clarity even after prolonged exposure to heat and sunlight. It also protects metal parts against the effects of salt spray and perspiration.

Typical applications include builders' hardware, vanity and cosmetic cases, lipstick shells and pen caps.

Where decorative color effects are desired on metal, DURACHEM can be supplied in a range of colors with the same chemical stability as the clear finish.

Samples and technical literature are available on request. Or an M & W technical consultant will discuss your requirements privately with you.

PIONEERS IN PROTECTION M&WCo 1876 OUR 78th YEAR

MAAS & WALDSTEIN CO. 2170 McCARTER HIGHWAY NEWARK 4, NEW JERSEY

Midwest Div.: 1658 Carroll Ave., Chicago 12, Ill.
Pacific Coast Div.: Smith-Davis Co., 10751 Venice Blvd., Los Angeles 34, Calif.

MANUFACTURERS OF INDUSTRIAL FINISHES

MIBK

The No. 1 medium-boiling solvent for nitrocellulose lacquers . . . for vinyl lacquers

For over-all performance and economy in lacquer formulation there is no substitute for methyl isobutyl ketone, because only MIBK has the solvent characteristics which permit formulating at top diluent content or top solids concentration.

And you need not tie up your bulk storage with extra solvents. Standardize on MIBK . . . the superior medium-boiling solvent for both nitrocellulose and vinyl lacquers.

MIBK is one of Shell's *quality* solvents which include among others MEK, MIBC, and IPA. Your Shell Chemical representative will be happy to discuss with you in detail the advantages to be gained from using MIBK in your lacquer formulations. *Just phone or write.*

Send for your copy today

SHELL CHEMICAL CORPORATION

Chemical Partner of Industry and Agriculture

Eastern Division: 500 Fifth Avenue, New York 36 • Western Division: 100 Bush Street, San Francisco 6
Atlanta • Boston • Chicago • Cleveland • Detroit • Houston • Los Angeles • Newark • St. Louis
IN CANADA: Chemical Division, Shell Oil Company of Canada, Limited • Toronto • Montreal • Vancouver

Capitol Presents the . . .

"FLAT BED" AUTOMATIC ELECTRIC SPRAY BAKE CONVEYOR COATING MACHINE

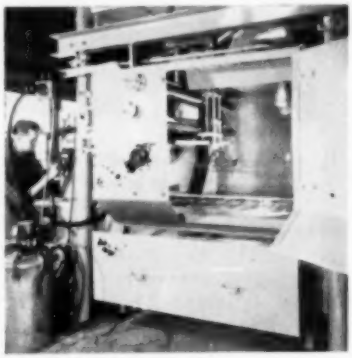
- **HAS BUILT-IN DRYING CHAMBER AND ELECTRIC STRIP-HEATED OVEN.**
- Equipment includes conveyor, dry or water-wash spray booth, drying compartments, electric strip-heated oven, controls, etc.
- A continuous conveyor operation with spray gun travel from 18-in. to any desired width.
- Automatically sprays a wide variety of flat work from small buttons to large panels, which travel through a drying chamber for solvent evaporation and then into electric strip-heated bake oven.
- **PAYS FOR ITSELF IN REGULAR PRODUCTION WITHIN THREE TO SIX MONTHS.**
- Produces a high-quality finish and exceptional savings on flat odd shapes that are difficult to handle.
- Has variable speed drive to meet any scheduled requirement.
- Exceptionally easy to clean and maintain.

Let us make a test run of your own work samples—for time study and cost analysis—no obligation.

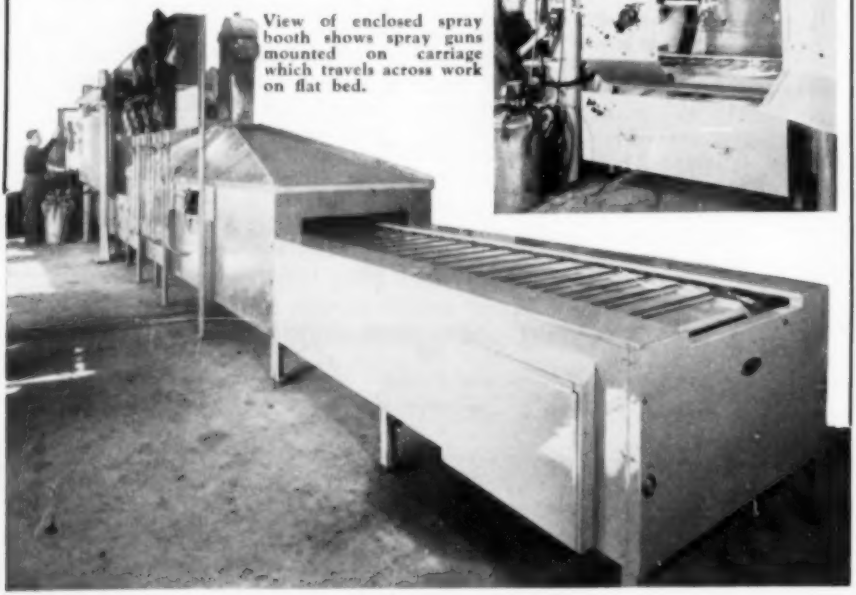
THE CAPITOL MACHINE CO.

36 Balmforth Avenue

DANBURY, CONN. **Tele. Danbury 3-2758**



View of enclosed spray booth shows spray guns mounted on carriage which travels across work on flat bed.



Add beauty and sales appeal to your products with . . .

POLYCHROMATIC

Industrial Finishes

using REYNOLDS NON-LEAFING ALUMINUM PIGMENTS

REGULAR

The most iridescent polychromatic finish . . . in great demand for automobiles . . . translucent enamel or lacquer used as the color base.

WRINKLED

For glare-free surfaces . . . produced during short baking operation . . . opaque enamel base has good defect-hiding properties.

HAMMERED

Achieves the effect of ball-peening . . . gives a multi-toned texture . . . conceals minor surface defects.

Reynolds technicians will be glad to work with you and your finishes supplier to achieve the right polychromatic finish for your product.

NOTE:

CHROME REPLACEMENT FINISHES

(with leafing aluminum pigment)

- Metal parts are sprayed with a synthetic resin primer . . then with a slurry of aluminum paste.
- Tiny aluminum flakes rise to the surface and are baked into position. Parts are then sprayed with transparent color or clear synthetic lacquer and again baked. This gives a tough, attractive satin finish with good adhesion. It is resistant to salt spray (250 to 400 hours).

Forconsistency in color and result, for constant high-quality and performance, order Reynolds Aluminum Pigments for your polychromatic industrial finishes . . . Regular, Hammered and Wrinkled.

With these Reynolds patented* non-leafing aluminum pigments, the aluminum remains evenly dispersed as the coating sets-up. The scattered aluminum flakes produce depth and iridescence to add beauty and sales appeal to your products.

Send for the free brochure, "Industrial Polychromatic Finishes," Reynolds Metals Company, 2533 S. Third St., Louisville 1, Kentucky.

*U. S. PATENTS 2,609,377 AND 2,703,751 (CAN. PATENT 490,080)

See "Mister Peepers" Sundays on NBC-TV. Consult local listing for time and station.

REYNOLDS ALUMINUM

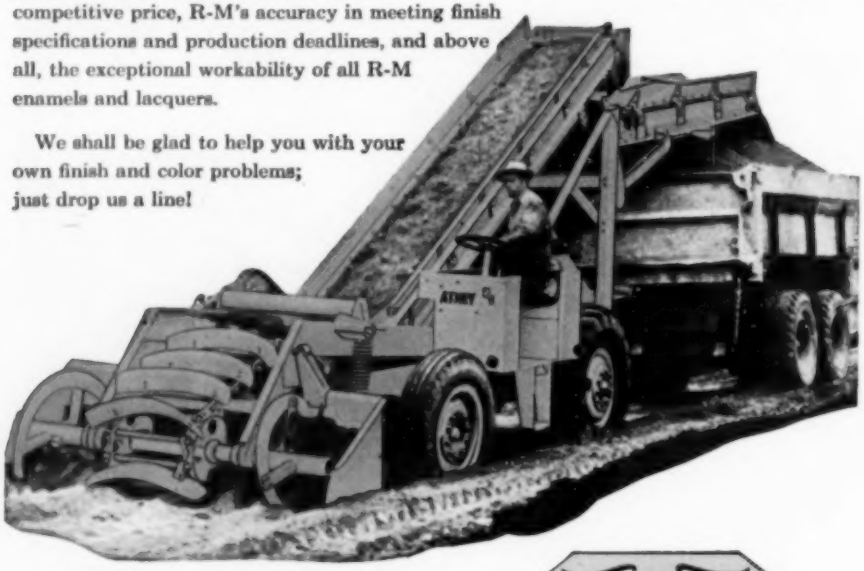
MODERN DESIGN HAS ALUMINUM FINISHES IN MIND

Why ATHEY paints hard-working HiLoaders with R-M ENAMEL

Durable R-M ENAMELS offer the tough-coat protection that road construction equipment really needs! And Athey . . . like so many other heavy equipment and automotive manufacturers . . . has discovered all-important additional advantages: R-M's competitive price, R-M's accuracy in meeting finish specifications and production deadlines, and above all, the exceptional workability of all R-M enamels and lacquers.

We shall be glad to help you with your own finish and color problems; just drop us a line!

A rugged Athey 125 force-feed "HiLoader" quickly clears dirt from a road bed under construction. Easily visible R-M yellow enamel gives lasting protection.



RINSHED-MASON CO.

PAINTS • ENAMELS • LACQUERS • VARNISHES

R-M REG. U.S. PAT. OFF.

DETROIT 10, MICHIGAN ANAHEIM, CALIFORNIA WINDSOR, ONTARIO, CANADA

Now THE NEW

Schmieg CENTRI-MERGE

Vertical Rotor Type DUST and FUME *Eliminators*

FOR THE MOST

Economical COLLECTION and ELIMINATION *Efficiency*

An important new Schmieg development to wash hazardous dust and fumes from the air in a rotating torrent of water, combining the cyclonic principle of dust separation and *positive* high pressure water action.

Just a few of many reasons why a new Centri-Merge unit is your best investment in operating efficiency and economy:

• Low ratio of power to rated capacity • High ratio of water circulated to air volume handled • Independently driven low speed rotor and fan permit adjustments to load and operating conditions • No slots or nozzles to restrict water action • Automatic liquid level control • Optional location of air inlet arm • Material disposal by drag conveyor, hopper tank skim-off or manual clean-out • Easy access to clean-out doors for cleaning while unit is in operation • Bearings located out of liquid, fully enclosed, lubricated from outside.

Available in Two Types

1. For wet collection and elimination only.
2. For primary dry and secondary wet collection and elimination, with built-in dry type precleaner.

Capacities from 500 to 50,000 C.F.M.

Write or phone for Bulletin VU 8-53, describing the new Vertical Rotor Units. Then consult with Schmieg engineers to plan a Centri-Merge installation for maximum dust and fume collection and elimination efficiency in your plant.

THE *best* AIR PURGE IS CENTRI-MERGE

Schmieg INDUSTRIES INC.

Engineers & Manufacturers

Pioneer Manufacturer of Wet Type Dust and Fume Elimination Equipment

P. O. BOX 4701 • DETROIT 34, MICHIGAN

Painting McCulloch Engines

BY FRED M. BURT

Here you see in operation solvent spraying (for cleaning), water wash spray booths, hot spraying of prime coats and enamels, overhead electric ovens, overhead monorail and flat-bed conveyors, facilities for final testing and inspection.

THE CHIEF products manufactured in the plant of McCulloch Motors, Inc., in Los Angeles, are small gasoline engines made in four sizes. These include Model 33 (2-hp., 20-lbs.), the 4-30's (4-hp., 30-lbs.) for McCulloch's small chain saws; the 7-55's which are used to power large chain saws, earth drills and pumps; and 4-cylinder 70-hp. aircraft engines, each of which weighs only 78-lbs. Materials used

[PAGE 22]

in the manufacture of these small engines include die-cast magnesium and aluminum.

In McCulloch's modern air-conditioned factory all production and allied operations are highly mechanized. The company has installed mechanical handling equipment that seems to be best suited to each specific job. An excellent illustration of how the setup works is revealed in the surface conditioning and painting departments, followed by assembly, testing and inspection.

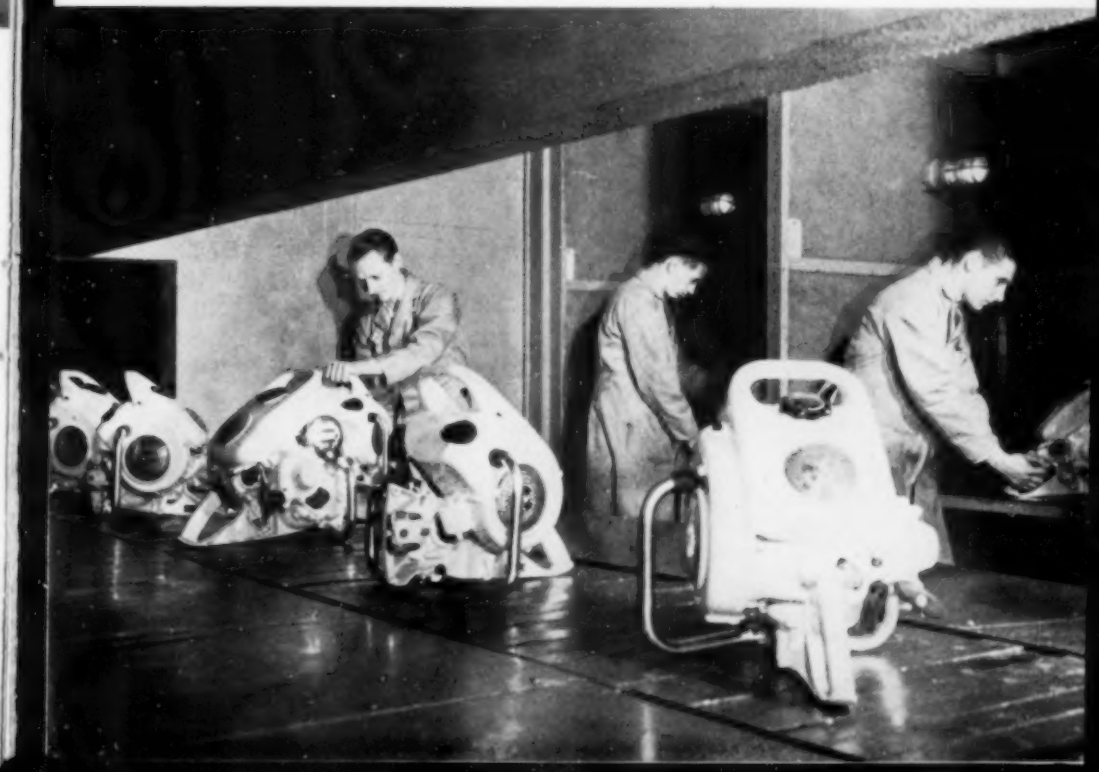
Starting at two assembly lines and moving on to the delivery of completed engine units in the shipping department, three overhead chain conveyors are in operation. Their total length is about 2900-ft.

After the engines are assembled they are hung to hooks attached to the first overhead conveyor. This 1100-ft. chain conveyor has a variable speed drive, with a speed range of 1-ft. to 6-ft. per minute, but it usually travels at 1½ to 2-ft. per minute.

Assembled engines are moved into the first test room where they are fueled, started and adjusted. (The mixed fuel contains some lubricating oil.) The horsepower rating is tested with the engine in all positions (upside down, etc.) on dynamometers in test cells. Then

Left: A 3-section water-wash spray booth where No. 4-30 engines are being painted yellow.

Below: Engines undergoing final inspection, testing and, where required, touch-up spraying.



Work table where areas not to be painted are masked. Solvent drying tunnel in background. The striped section shows where spare parts are loaded for prime coating booth to the left.

the fuel is drained out and the tested engines, again traveling by conveyor, pass over a tank where they are given a thorough cleaning with sprayed solvent.

Cleaning; Drying; Masking; Spraying Prime Coat

Moving into the next room the chain conveyor rises to a higher level and carries the cleaned engines through the first of four electric radiant drying tunnels. Engines are then moved down to the masking table where certain areas are masked for spray painting. Here those areas and parts that are not to be painted are temporarily covered with pre-cut stick-on paper masks or masking tape. The prime coat is electrically heated and sprayed on as the engines move through an 8-ft. waterwash spray booth. Water in the bottom of this booth is treated so the overspray of paint residue floats and accumulates where it can be easily removed, while the used water is cleaned by filtering and recirculated in the booth.

Compressed air in the main pipe lines is under a pressure of at least 100-lbs., but this is reduced as it passes through a pressure regulator before it enters the hose to a spray gun. The compressed air also passes through a water and oil extractor before entering hose to spray guns. Air pressure at the gun measures 65 lbs. per square inch. Paint primer and enamel are

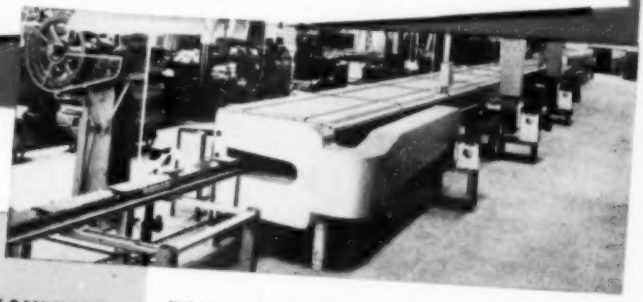
"Production Stepped-Up 500%"

with JENSEN PAN-L-HEAT

Kenneth M. Parsons, Works Manager at Air Control Products, Inc., says:

"One mile of product was previously tops for eight hours' production. Now, with a Jensen Pan-L-Heat oven and conveyor, we're doing *five miles* with ease. We're pleased, too, with the *quality* of finish. Also—costs have been cut way down. Only two operators—one at each end (*150 feet apart*) —are required for the entire operation."

There's a Jensen sales engineer near you who would like to talk about INCREASED PRODUCTION and COST CUTTING for YOU. Why not call him in right now.



This 63-ft., 240-KW Pan-L-Heat oven and Jensen conveyor are doing a better job—quicker—for Air Control Products, Inc., Coopersville, Michigan. The product (steel awning sections) is painted on both sides before reaching conveyor.

YOUR PLANT CAN HAVE

- Increased pay load realization.
- More effective use of electric heat.
- Uniform, high quality production.
- Superior results with shorter heating cycles—at lower energy consumption.

Jensen SPECIALTIES, INC.

PAN-L-HEAT Ovens

REPRESENTATIVES IN PRINCIPAL CITIES

9331 Freeland Ave.
Detroit 28, Mich.

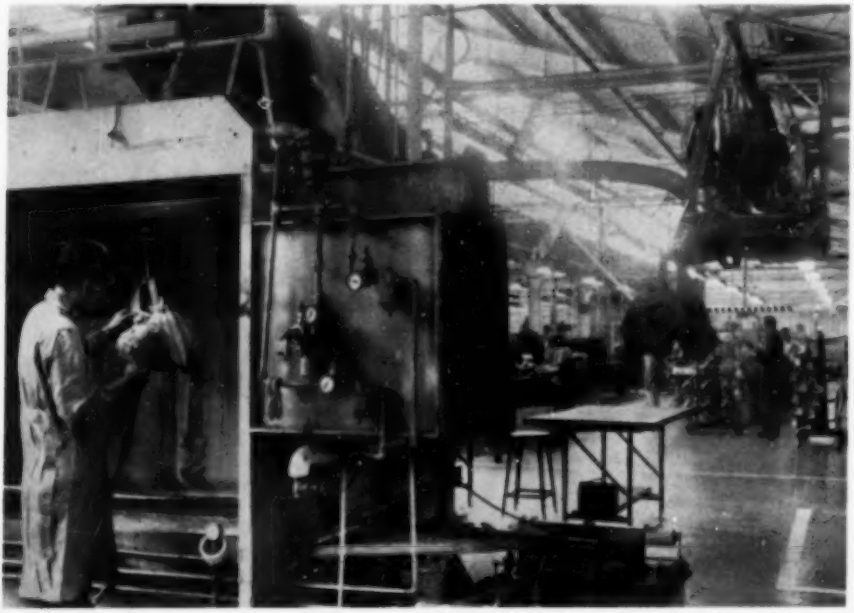
pumped to the spray booths directly from 55-gallon drums in the paint mixing room, and are sprayed hot.

Interiors of the spray booths (that is those surfaces over which no water flows) are regularly cleaned and spray coated with a peel-off coating which, when it becomes loaded with overspray, can be easily stripped off in large sheets and disposed of.

Prime Coat Is Baked

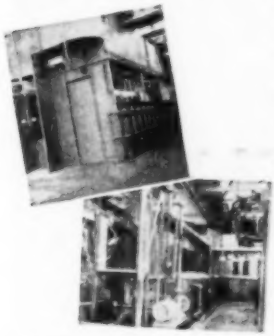
The prime-coated engines move through a cylindrical radiant baking tunnel which is 34-in. in diameter and 18-ft. long. All of the drying and baking ovens mentioned use all-metal Chromalox electric radiant heaters and percentage input controllers. Six foot heaters are used as standard so that all ovens use basic 6-ft. sections of six heaters per section. These six units are rated 3000-watts each and are equally spaced around the circumference of the oven to give uniform heating of each rotating engine. The linear radiant metal elements are supplied mounted in an extruded reflective aluminum housing ready for two-bolt mounting to a simple self-made angle frame.

Light weight reflector sheets are installed between the heaters and supported by means of linear slots in the heater housing. These serve both as reflectors and to maintain the controlled ambient within the tunnel. [*Continued on page 28*]



Prime-coat water-wash spray booth, with auxiliary equipment. At upper right, electric oven.

P-D .. nothing like a complete "Package"

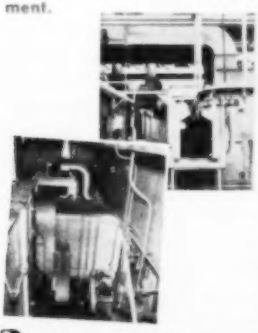


Complete Finishing Systems for Enamel, Lacquer, Paint or Varnish—including Metal Cleaning and Rust-Proofing Equipment—Dry-Off Ovens—Hydro-Whirl Spray Booths—Filtered Air Supply Systems—Drying and Baking Ovens and Overspray Reclaiming Systems. Hydro-Whirl Dust Collecting Systems and Other Units of Special Production Equipment.

when installing a PAINT FINISHING SYSTEM

Check YOUR needs with Peters-Dalton where more than 20 years of Finishing System leadership and experience are backed by expert engineering and design.

Why "pick" and "choose" components separately? P-D will install a complete, continuous Paint Finishing System that is tops in efficiency and economy because it is planned, engineered and produced step-by-step for you and you only . . . Peters-Dalton engineers lay out the *complete system* to meet whatever requirements and space limitations necessary in your plant.

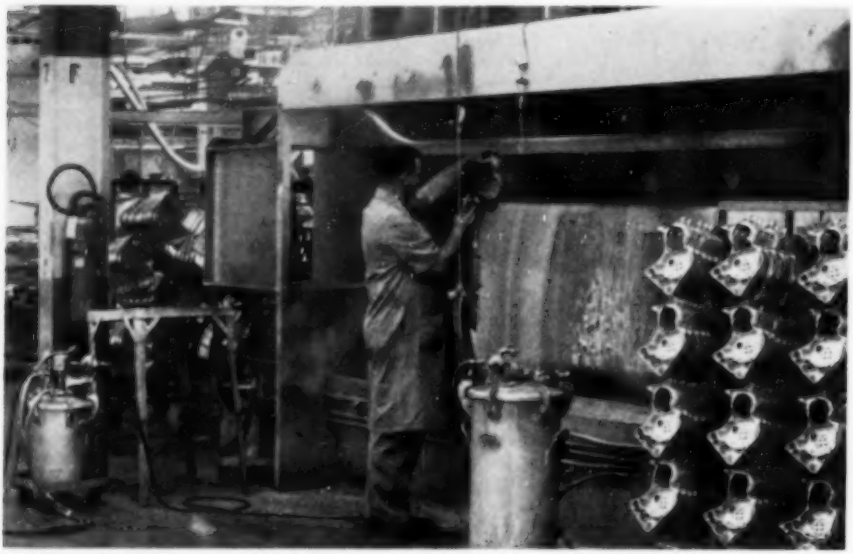


Illustrated in the "Package" is a complete P-D Paint Finishing System which handles 700 electric food mixers hourly . . . so compact that it requires but two 20′ x 20′ bays . . . It consists of a 6-stage cleaning and rustproofing machine with automatic charging and automatic centrifugal chemical reclamation devices . . . a separate moisture dry-off oven . . . necessary cooling space . . . a completely enclosed spray operation with conditioned air supply . . . supply equipment on the floor adjacent to overhead bake ovens . . . bake oven heaters underneath ovens . . . material flows from bake ovens to assembly and packaging in next bay.

A P-D installation means one responsibility for final, satisfactory results—means the performance of a Finishing System that you can rely upon for smooth, efficient, integrated operation and high quality work at lowest possible costs.

Hydro-Whirl Paint Spray Booths *Industrial Washing Equipment*
Drying and Baking Ovens *Hydro-Whirl Dust Collecting Systems*

P-D Peters-Dalton INC.
17916 Ryan Road • Detroit 12, Michigan



At this modern water-wash booth, spare parts are being spray painted with heated enamel.

Input controllers allow step-less adjustment of the intensity of radiation to meet variations in conveyor speed or humidity. Complete oven sections can be turned for proper drying with a single knob control.

As compared with other heat sources, this method of heating is resistant to mechanical and thermal shock because of the simple all-metal construction. It was also found that these units were less expensive to operate because of lower current consumption and lower maintenance costs.

Spraying Yellow Enamel; Final Baking

Following the baking of the prime coat, we come to a 26-ft. long water-wash spray booth where the "McCulloch yellow", a fast-drying synthetic enamel, is applied. As the engines pass through this spray booth by conveyor they are rotated by hand for complete over all spraying, but in the baking tunnel a mechanical device causes each loaded hanger to revolve slowly for uniform baking of the enamel coat.

Beyond the enamel-coat spray booth the chain conveyor line rises to a higher level to move the enameled work through a 36-ft. baking tunnel. Then it circles back to drop to a lower level for unloading at the final assembly line.

A wire mesh guard, installed under the conveyor line, protects workers from anything heavy that might drop from the conveyor; also, drip pans are positioned to catch any oil drippings from the conveyor chain. Due to the fact that the conveyor travels through a number of heated tunnels, its bearings must be lubricated continuously by an automatic oiling device.

Final Assembly of Product; Touch-up Painting

On the final assembly table various added items are attached to the engine to make the completed products—for example, chain saws, etc. Completely assembled units are placed on a slat conveyor and carried into the final inspection and test room for visual inspection and spot checking of motor operations; also, along this line, facilities are provided for any final paint touching up that may be needed. This work is done with a cup spray gun. Finished units are delivered to the shipping room by another overhead chain conveyor.

Spare parts that require painting are loaded on the first conveyor, just past the masking table, for application of the prime coat. After the prime coat has been sprayed and baked the parts are removed from the conveyor just before it reaches the enamel - coat booth. They are transferred to a third conveyor to be carried through an enamel-coat booth which is positioned back-to-back with the first one; or they may be loaded onto portable metal racks for delivery to this spray booth when desired. After passing through the radiant baking tunnel and a cooling area they arrive in the spare parts inspection and packing room where they are removed from conveyor.

SENSATION of the PHILADELPHIA MATERIALS HANDLING SHOW

THE NEW LOW COST OVERHEAD CONVEYOR of revolutionary design for loads up to 60# per foot

If your requirements fall within its capacity, send for our new catalog giving complete information.

Distributors in principal cities

CHAINVEYOR

We can't begin to adequately describe the advantages of Chainveyor in limited space. Simplicity of design—Reduction of unnecessary bulk and weight—Full ball bearing chain—15" radius curves—The only conveyor system with chain and curves scientifically heat-treated to "file hardness" to triple the life—Simple, rugged, positive, sprocket tooth drive—So easy to install that half of our buyers do it themselves—and *the price is most interesting.*

United States Spring & Bumper Co.

4951 Alcoa, Box 2475 Terminal Annex Los Angeles 58, Calif

How We Prepare and

BY ROBERT J. DEISENROTH

Methods & Process Engineer, The Troy Sunshade Co.

NOT TOO LONG ago, brightly painted metal furniture was associated almost exclusively with out-of-door living. A shady lawn with a table and comfortable chairs, all attractively painted, was the usual setting. Then it moved in on the porch. Now, with modern adjustable glass enclosures for porches, metal furniture has become popular for sunporch use; and, in some cases, it is used in the game room, rumpus room and even in the living room. Sturdy construction, improved design and light weight materials have aided in this transition.

Here at Troy, Ohio, we make a wide variety of metal furniture. We have no possible way of knowing just where this furniture will be used — indoors, outdoors, in a hot dry climate, or along the coast where it will be exposed to both high humidity and salt air—so we take no chances. All of our metal furniture is cleaned and rustproofed before it is painted. With a baked primer and top coat enamel,

[PAGE 30]

both of excellent quality, we have an all-weather finish for outdoor use anywhere.

Metal Cleaning and Surface Preparation

Some of the furniture is completely assembled; these pieces, along with sub-assemblies and separate furniture parts, are hung on the finish conveyor. This overhead monorail conveyor is 2200-ft. long; it has trolley wheels on 24-in. centers, and hangers on 8-in. centers. The chain is driven through a variable speed drive at 10-ft. per min.

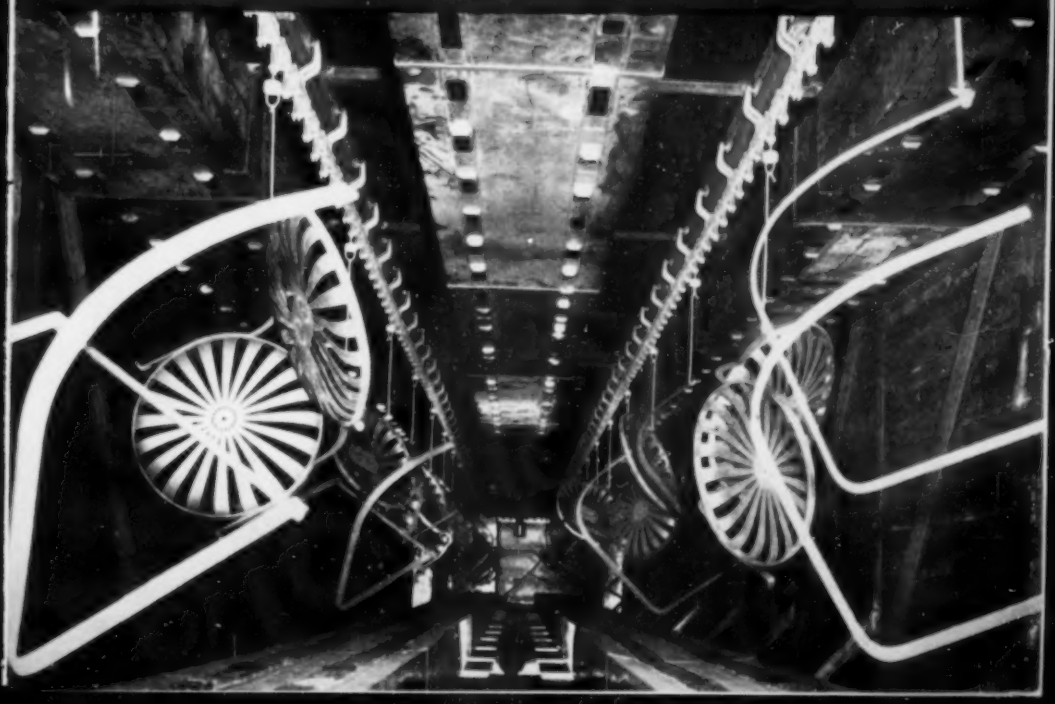
The loaded conveyor enters and passes through a 5-stage power washer. In the first stage an alkali cleaner with emulsion added (3½-oz. per gallon of water) is sprayed on at 160° F. This is followed by a hot water rinse at 145° F. A constant overflow tank is used in this stage. In the third stage a rust-proof solution (at 135° F.) is sprayed over the work, followed by a cold water rinse. In the fifth stage a mild chromic-phosphoric acid solution (4-oz. per 100 gallons of water) is sprayed at 130° F.

(Continued on page 33)

At left: Entrance to flow coating machine, wherein prime coat is applied mechanically. Photograph courtesy of The Spra-Con Co.

Below: View inside the finish coat bake oven.

Paint Metal Furniture



The arrow points to the approximate location of Jamestown Finishing Products Inc.'s research department, the pride and joy of our new modern plant. Here a 20-man team of research chemists keeps careful watch over the quality of AVALEX (trade name for our line of lacquers, enamels, varnishes and stains). Since 1911, the accent has been on research at Jamestown, to keep our finishes the standard of quality for the industry. Our facilities are at your disposal. Let us help you with your finishing problems.

SPECIFY **AVALEX**

TRADE NAME FOR THE SUPERIOR QUALITY LACQUERS, ENAMELS, VARNISHES, STAINS AND OTHER INDUSTRIAL FINISHES MADE BY:

BETTER FINISHES THROUGH RESEARCH — JFP PRODUCTS — ESTABLISHED 1911

JAMESTOWN FINISHING PRODUCTS, INC.

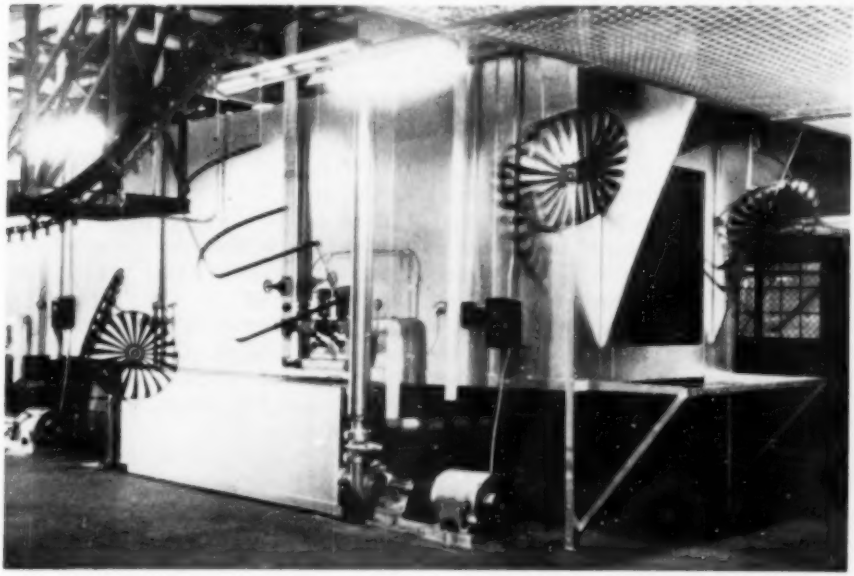
JAMESTOWN, N.Y.

Upon leaving the metal washer any excess water or solutions entrapped in corners and close places drains before the pieces enter the dry-off oven. (We have provided drain holes in all of our work pieces.) A period of four minutes time elapses while each piece is traveling through the dry-off oven where the temperature is 300° F.

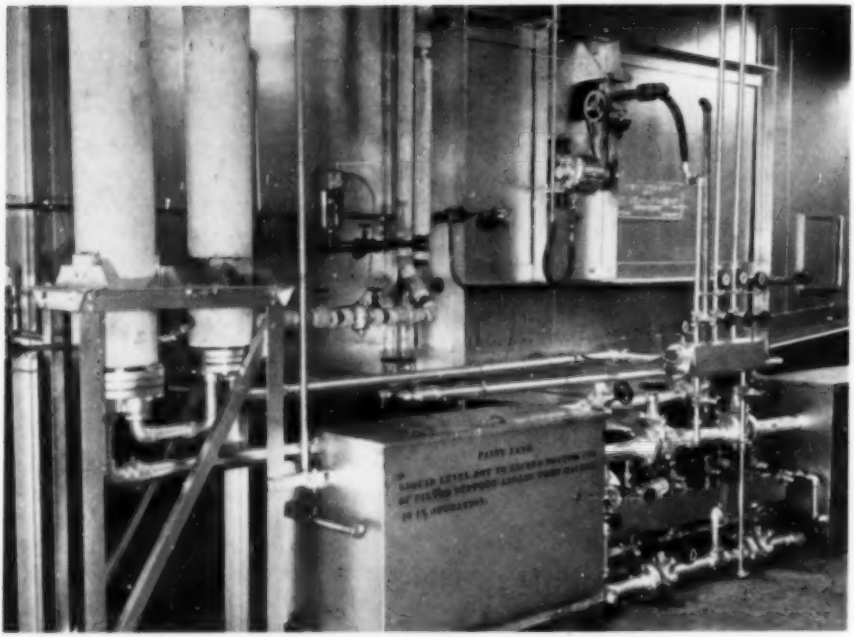
Primer is Applied by Flow Coating Machine

Due to various shapes of pieces and a preponderance of open work in our metal furniture, we chose flow coating as a means of applying the primer coat. This method has given excellent results. Part of our success with this operation can be attributed to the adaptability of the product to the method, but a large part of our success is due to preliminary work and study in establishing correct working viscosity, paint temperature, type of solvents, solvent balance and the length of time coated pieces should remain in the solvent concentration chamber. Finally, close cooperation and supervision are necessary to see that established standards are maintained at all times.

The actual flow coating is quite simple. Parts hanging from the overhead conveyor enter the coating zone of the flow coater in which there are three rotating arms (each like a whirling baton). One of these arms is mounted on each vertical side wall and one is located in a horizontal position at the bottom of the coating zone. Each rotating arm carries two spray nozzles (one



Exit end of five-stage metal washer and surface preparation equipment, all conveyorized.



Close-up of paint supply tank (lower foreground) and solvent tank at extreme right. Main manifold and piping, also heating and cooling units, appear at left. The latter are used to control the temperature of the paint, keeping it always at 80° F. The one motor and V-belt drive shown (upper middle) are connected to a revolving spray arm inside the enclosure. Photograph, courtesy of The Spra-Con Company.

near each end) from which primer is sprayed at 10 to 15-lbs. pressure. (No compressed air; just pump pressure.) The speed at which the arms rotate can be controlled within the range of 50 to 80-rpm. As the three arms rotate, primer is sprayed from the nozzles onto the work pieces. The work virtually passes through a heavy fog of paint particles traveling in all directions, even though atomization has not taken place.

We use an epon resin-base primer having a viscosity of 21 seconds at 80° F., as measured in a No. 2 Zahn cup. The primer is maintained at 80° F. throughout the year. This is done by running the primer through a paint heater during cold weather, and through a cooler during the hot summer months as needed. Close and accurate control of viscosity is of utmost importance for obtaining uniform film thickness.

As the parts leave the coating zone, they enter an enclosed drain zone where solvent vapor concentration is controlled; in this solvent-vapor-laden air, about 99% of the excess primer drains off the parts

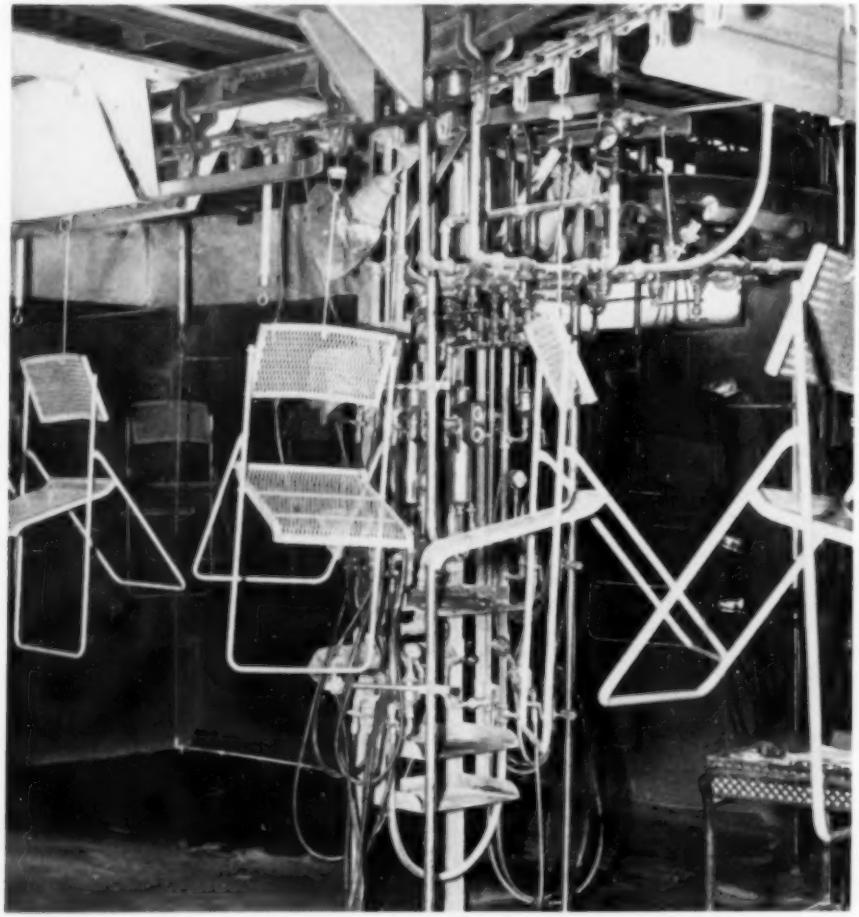
... cut paint stripping costs in half!
Write us today for free samples and see how one of Pelron's new cold strippers can give you better paint stripping results at about one half the cost. This is possible because they can be used cold — exactly as delivered with no costly time for preparation. And you get a job that is comparable with any available hot stripping compounds. On top of that, Pelron strippers are non-toxic and will not injure any metal surface or damage clothing.
Pelron's new strippers are: Unisol 45 especially developed for removing baked enamels; Unisol 199 for fast stripping of Japan and vinyl finishes; and Unisol 240 for lacquers. Write today for free samples and see how Pelron can solve your stripping problems.
PELRON
CORPORATION
INDUSTRIAL OILS AND CHEMICALS
FOR BETTER PRODUCTION AT LOWER COST
Chicago • Detroit • Cleveland • Buffalo
Milwaukee • Indianapolis • Rock Island • South Bend
7740 W. 47th Street, Lyons, Illinois

SEND FOR **FREE** TECHNICAL BULLETIN ON **PELRON** PAINT STRIPPERS

and flows back into the supply tank for reuse. All paint is filtered before it is pumped into the coating zone. Elapsed time for parts in the flow coater drain zone is just 15 minutes; this includes a 3-minute pre-drying with hot air at 150° F. before leaving the flow coater.

The primer is allowed to further set-up or air-dry for ten minutes as the pieces travel up to a direct gas-fired convection type oven located on the roof of the building. Here the primer is baked for 20 minutes at 300° F. The dry film thickness of the prime coat is 0.3 to 0.5 mils.

(Continued on page 38)

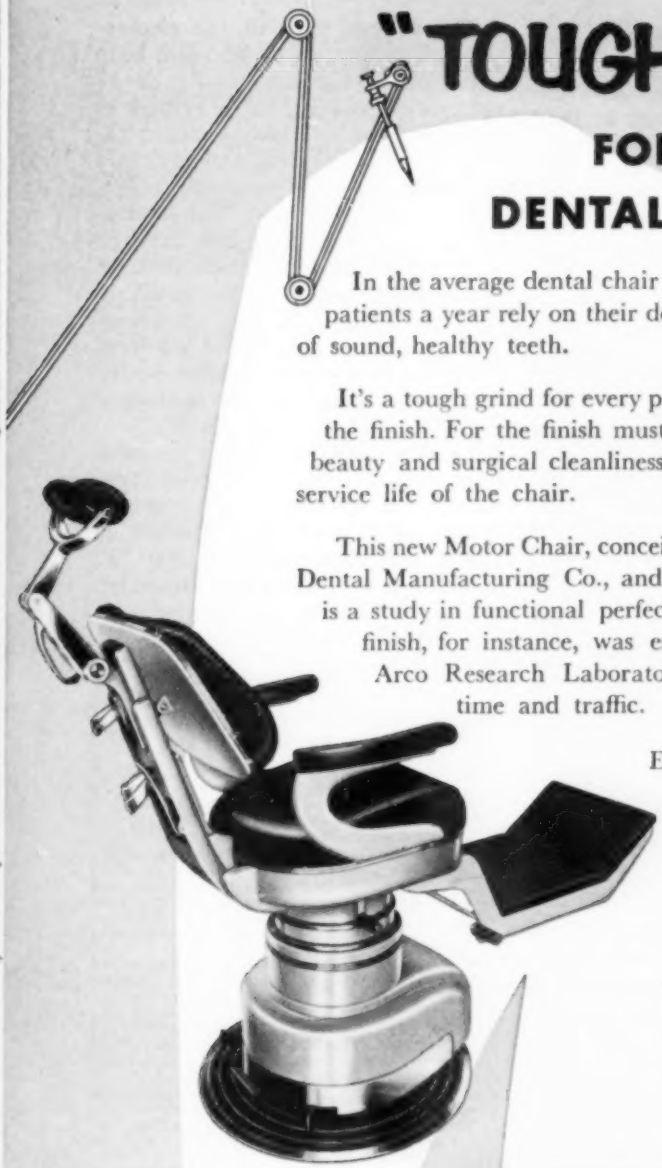


Prime-coated chairs move into the No. 1 electrostatic spray booth for their finish coat. Photograph, courtesy of Ransburg Electro-Coating Corporation.

It happens every day...

"TOUGH GRIND"

FOR A DENTAL CHAIR



In the average dental chair 3000 patients a year rely on their dentists for maintenance of sound, healthy teeth.

It's a tough grind for every part of the chair . . . including the finish. For the finish must maintain its appearance of beauty and surgical cleanliness throughout the long, hard-service life of the chair.

This new Motor Chair, conceived and built by S. S. White Dental Manufacturing Co., and styled by Henry Dreyfuss, is a study in functional perfection. It's gleaming, durable finish, for instance, was especially formulated in the Arco Research Laboratory to withstand the test of time and traffic.

Experienced Arco formulators tailor quality paints to exacting specifications . . . and *pre*-prove performance by Arco Cycle Testing which evaluates finishes to a degree unequalled in the industry. Write for full details.

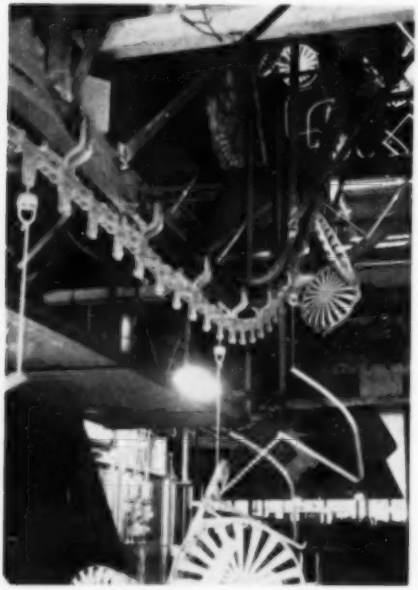
ARCO PAINTS
Quality ... SINCE 1881

TESTED FIRST TO LAST!

THE ARCO COMPANY, 7301 BESSEMER AVENUE • CLEVELAND 27, OHIO
A SUBSIDIARY OF AMERICAN-MARIETTA COMPANY
ARCO COMPANY OF CALIFORNIA, LTD. 745 E. 59th ST. • LOS ANGELES 1, CAL.

Finish Coat Enamel Applied Electrostatically

Upon leaving the prime coat oven, pieces cool for ten minutes as they travel down to the electrostatic spray booth. This is a double unit booth where parts enter on one side and make a U-turn at the rear; then, as they leave, they pass through a high voltage electrostatic field where the ionized particles of paint are deposited on the surface. At present we are using eight fixed spray guns, four on each side at the exit end of the booth. The double unit booth has this advantage: If and when our production should change, it will be a simple matter to spray products both as they enter and as they leave the booth.



Entrance and exit ends of finish coat oven.

The enamel used in the electrostatic booth is an alkyd resin base material having a viscosity of 17 seconds at 76° F., as measured in a No. 2 Zahn cup. Atomizing pressure is 10 to 15-lbs., and the fluid pressure is 2 to 5-lbs.

As the pieces leave the electrostatic spray booth they pass through a hand spray booth where some of the shielded areas of the furniture are touched up by hand spraying. The enamel used for this touch-up work passes through a paint heater which is thermostatically controlled at 165° F.

The furniture travels for ten minutes up to the finish bake oven (providing an adequate flash period) where the finish coat enamel is baked for 20 minutes at 300° F. This is a direct gas-fired convection type oven using recirculated air. The total dry film thickness is 1.5 to 2.0 mils.

Lacquer Information Center at Paint Industries Show

Hercules Powder Co., announces that for the third successive year a lacquer information center will be a feature of the annual Paint Industries Show in Atlantic City's Chalfonte-Haddon Hall, Oct. 27-30.

Once again the exhibit is being presented through the cooperative effort of suppliers of raw materials for lacquer and suppliers of equipment for spraying lacquer. It will depict the latest developments in lacquer technology, formulation, and application.

Companies which are co-sponsors of this year's exhibit include The Baker Castor Oil Co.; Carbide & Carbon Chemicals Co.; Enjay Co., Inc.; Antara Chemicals Div'n. of General Dyestuff Corp.; Hercules Powder Co.; Sharples, Inc.; Shell Chemical Corp.; Bede Products, Inc.; toria Pressed Steel Corp.; The S Binks Mfg. Co.; Dualheat, Inc.; Fostoria Pressed Steel Corp.; The Spee-Flow Co.

Technically trained representatives of the various sponsoring companies will be at the exhibit.

Included in the exhibit will be air-dry primers, topcoats, wood finishing systems, the newest in aerosol lacquers and lacquer for texture finishes, as well as the latest equipment for applying lacquers.

SOLVENTS and CHEMICALS for Metal Cleaning

VAPOR-PHASE CLEANING. Quality-controlled, fully stabilized trichlorethylene and perchlorethylene from America's leading manufacturers. Large stocks always available. Use our quick supply service.

COLD WASH SOLVENTS. Over 26 cold wash solvents for metal cleaning including NEW Odorless Mineral Spirits and NEW Hi-flash, quick-dry mineral spirits. Both are Underwriters Laboratory Rated. Investigate today. Ask for test samples.

FREE ORGANIC SOLVENTS HANDBOOK. New Revised 64-page handbook packed with information in non-technical language. Includes definitions, comparison tables, testing methods and product descriptions. For your free copy call or write on your company letterhead today to your nearest Solvents & Chemicals Group member.

THE SOLVENTS AND CHEMICALS GROUP

Distributors for America's Leading Producers

Consult your telephone directory for the address of your nearest Group member.

BUFFALO—7	Buffalo Solvents & Chemicals Corporation
CHICAGO—12	Central Solvents & Chemicals Company
CINCINNATI—29	Amsco Solvents & Chemicals Company
CLEVELAND—11	Ohio Solvents & Chemicals Company
DETROIT—11	Western Solvents & Chemicals Company
FORT WAYNE—8	Hoosier Solvents & Chemicals Corporation
GRAND RAPIDS—9	Wolverine Solvents & Chemicals Company
HOUSTON—15	Texas Solvents & Chemicals Company
INDIANAPOLIS—22	Hoosier Solvents & Chemicals Corporation
LOUISVILLE—1	Amsco Solvents & Chemicals Company
MILWAUKEE—14	Wisconsin Solvents & Chemicals Corporation
NEW ORLEANS—18	Southern Solvents & Chemicals Corporation
ST. LOUIS—7	Missouri Solvents & Chemicals Company
TOLEDO—6	Western Solvents & Chemicals Company
WINDSOR, ONT.	Western Solvents & Chemicals Co.

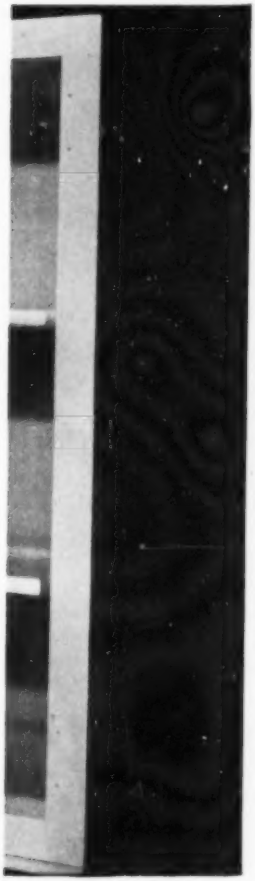
DeVilbiss JGA spray gun gives operator fine atomization, a broad, even pattern at normal pressures.

Spray guns

Spray booths

Hose and connections

BRANCH OFFICES AND DISTRIBUTORS IN PRINCIPAL CITIES THROUGHOUT THE



It's the fine finish that decides the sale!

You need something special to sell kitchen cabinets in today's highly competitive market. On **Coppes Napanee** custom-built kitchens that "special" is a finish so beautiful that buyers are willing to pay a premium price for the extra quality.

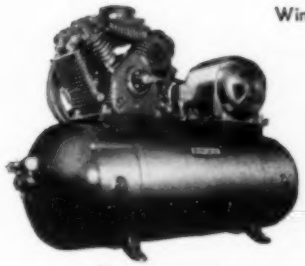
For years, Coppes Inc., Nappanee, Ind., have depended on DeVilbiss spray equipment to create this quality finish that complements excellent design and fine craftsmanship.

DeVilbiss guns, for example, are used in all spray operations. These guns with the ball and cone principle of fluid tip and air cap centering assure a perfect spray pattern of uniform quality and with the correct combination of air cap and fluid tip, the finest atomization. Finishes are smoother, have greater depth, are more durable.

You can get complete data on DeVilbiss spray guns and other DeVilbiss equipment for high quality finishes from your DeVilbiss jobber or our nearest branch office. Call today or write to the factory.

THE DEVILBISS COMPANY, Toledo, Ohio

Windsor, Ontario • London, England • Santa Clara, Calif.

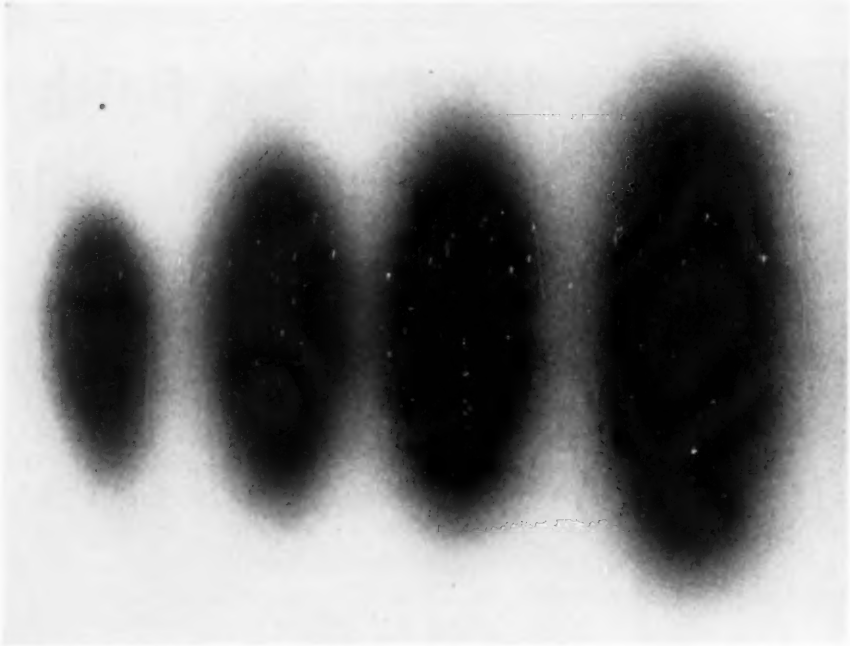


Air compressors

FOR BETTER SERVICE, BUY

DEVILBISS

UNITED STATES, CANADA AND THE WORLD



Typical spray patterns made by a clean spray gun, correctly adjusted. The "fan" control adjustment of spray gun was set and widened at intervals as these patterns were sprayed.

Spray Gun Efficiency

IN PRODUCTION spray work it is important that management remove all obstacles that keep costs high. Contributing to high costs are inadequate or incorrect spray finishing equipment and operators who are untrained or improperly trained or careless. A careful study of the tools, fixtures and equipment can pay dividends in reduced costs. It is also important to adopt standard spray painting procedures supervised by a competent finishing foreman.

BY FRANK J. GREEN*

With nearly all manufactured items receiving a coat of paint, lacquer or varnish before they are sold to the consumer, spray finishing is

*Mr. Green has been engaged in production spray finishing for more than 24 years, as a supervisor and instructor in the furniture and aircraft industries. He has had wide experience with spray painting equipment, circulating systems, conveyors, ovens, degreasers, dipping tanks, automatic washers, stripping tanks, rinse tanks, wood graining tools and equipment.

an important consideration in determining manufacturing costs. The tool which applies high quality finish and which should be in perfect working order is the production spray gun.

Production Spray Gun.

The production spray gun is a precision built tool which, with careful maintenance and expert handling, will give perfect service and produce a clean symetrical spray pattern.

Cut away view showing what's inside one make of spray gun and how the adjustments work.

The purpose of the spray gun, when connected to a pressure paint system, is to apply a wet, smooth and even coating to an object or surface at a minimum of cost, with the operator supplying the correct technique and speed.

The gun is designed to bring together the finishing material and compressed air, with the two passing through the air cap in an atomized state. Control is maintained over the pattern by proper adjustments of the fluid, spray width and pattern control.

The master finisher, realizing that a craftsman is as good as his tools, takes pride in his equipment. The three points on a spray gun that require lubrication are the air valve packing, the fluid needle packing and the trigger bearing. An expert industrial finisher oils these points daily and takes special precautions to keep the air cap of the gun clean. A dirty air cap will affect the spray pattern and will produce defective work.

Air Valve of Spray Gun

The air valve controls the air entering the gun. It is opened by applying pressure to the gun's trigger and closed by a spring when the trigger is released. In spraying operations, the air valve opens in advance of the fluid valve to assure completely atomized fluid. If the valves opened simultaneously or if the fluid valve opened before the air valve, the finishing fluid would be shot out of the gun in spurts and ruin the surface being finished. Another advantage of the air valve opening first is to give the operator an opportunity to blow off the surface before it receives a spray coat of material.

Fluid Valve of Spray Gun

This valve controls the fluid (paint, varnish, lacquer, etc.) that goes through the gun's nozzle. The fluid valve is opened by triggering the gun and it is closed by spring action when the trigger is released. Adjustment of the fluid valve for syphon spraying regulates the movement of the needle which is seated in the nozzle. The valve, if used as a controlling means, must

be adjusted for the various types of finishing materials being used. In production spraying it should always be open to permit the greatest ease and least tension in operating the spray gun. Control of fluid flow should be by varying the pressure on the fluid.

Graduated Spray Width Adjustment

The spray width adjustment controls the amount of air that enters the air cap, giving easy and instantaneous selection of desired spray width and pattern. By simply turning the adjustment control, the spray pattern can become round or it can be an extreme open fan shape. The spray pattern is determined by the operator, and depends upon the objects being spray coated.

Spraying Procedure

In spray finishing, the gun should always be held so it points directly (at right angles) to the surface that is being coated. The distance from the gun nozzle to the work will vary according to the type of parts or products being sprayed, width of spray fan, atomizing pressure and nature of the work. The distance from the work also determines the speed of the stroke. In normal spraying this distance is usually 8 to 10 inches from the surface.

The gun should be triggered as the stroke is started and the trigger should be released at the end of each stroke. Tilting or arcing the gun will result in uneven application and excessive overspray. Usually holding the wrist too stiff is the reason for arcing.

An improper gun-to-work distance can produce many effects—mostly undesirable. In the case of lacquer being sprayed at a high pressure, if the gun is held too close,

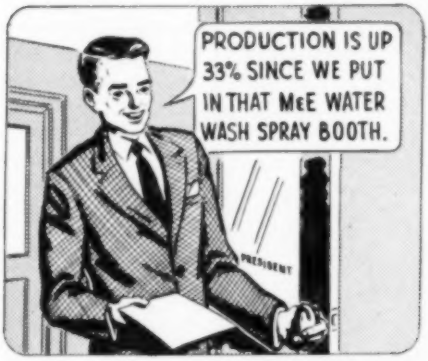
a roll up of material results. A distance of more than 10-in. may result in a gritty or sandy surface—a dry-looking granular effect. The use of too wide a spray pattern and holding the gun too far from the work will produce a foggy or dusty effect. This can be rectified by applying a mist coat of lacquer thinner which will not affect the finish.

The Spray Gun Cap

The spray gun cap is the most important part of the gun. In order for a gun to produce a high quality finish, the gun cap must be precision manufactured. The cap is where the fluid and the air meet and

Julian Freeman, President of Freeman Store Equipment Company, says—

"OUR M&E WATER WASH SPRAY BOOTH HELPED US DELIVER ARMY TRUNK LOCKERS ON TIME • WITHOUT REJECTS"



FREE GUIDE BOOK

If you want to cut finishing costs, increase production, or reduce booth maintenance and fire hazards, write for this book today. Illustrates and describes water wash and dry type spray booths, and spray finishing equipment.

M&E MANUFACTURING COMPANY • 2569 WINTHROP AVENUE INDIANAPOLIS 5, INDIANA

it is where atomization takes place. Manufacturers take careful precautions with the air caps so that no leaking will occur and so a perfect pattern will result. Any speck of dirt or a pinpoint defect in the spray gun cap will result in a bad spray pattern which will produce unsatisfactory work.

Spray gun manufacturers will supply instructions to aid in the selection of the correct air cap, fluid tip and needle for finishing materials, such as lacquers, enamels, stains, fillers, etc. Another thing to take into consideration is whether the spray gun will be used in conjunction with a paint circulating system, pressure tank, or by suction or gravity feed. There is a difference in caps when used with pressure or suction feed.

Multiple Jet Air Cap

This cap is advanced over the conventional air cap. It has better atomizing qualities and can handle the more viscous materials such as synthetic heavy-bodied lacquers. It eliminates split spray patterns which occur when air pressure is raised to atomize the more viscous finishing materials. The pattern with a jet cap is more uniform because of the better equalization of volume and pressure in the air cap.

The jet cap has several orifices—a center orifice, orifices in each horn and two pairs of additional jets called twin jets and auxiliary jets. The jet cap is used in automotive, furniture and household appliance finishing to produce a smooth, uniform coating.

"And stop calling me Dumbo!"

Fluid Tip or Material Nozzle

The fluid tip is a part of the spray head which regulates and directs the flow of finishing material into the air stream. The ball and cone principle is used in the nozzle manufacture to assure an air tight seating between the fluid tip and the air cap. It also provides for proper alignment between the air cap and tip, thus assuring correct spray performance. Nozzle sizes are indicated by either letter or number, depending upon the manufacturer. The large nozzle sizes are used for heavy, coarse and fibrous finishing materials, while the smaller sizes are used for materials with lower viscosity. Some finishing departments make a practice of using a suction-feed nozzle for both suction and pressure feed spraying. This does not produce the high quality finishing results which should be expected when using the correct equipment. [*Continued on page 48*]

IN AND OUT

Is All It Takes To—

• DRY

• PROTECT

For those plating silver, brass, or copper—

Merely out of the last hot water rinse, and in and out of Nikolas **Water Dip Lacquer,** removes all traces of water and deposits a durable transparent coating that will resist fingerprinting, tarnishing and mild scratches that have previously involved unnecessary rejects.

For those using plated parts in production—

Parts finished with Nikolas **Water Dip Lacquer,** assure you of untarnished parts, less rejects, and the necessity of ultra careful handling. If the final operation calls for soldering, no preparation is necessary, as the coating provides a chemically clean base metal that assures perfect bonds.

FOR COMPLETE INFORMATION ON

WATER DIP LACQUERS

CALL, WIRE OR WRITE

G. J. NIKOLAS & CO., Inc.

Manufacturers of Finest Lacquers Since 1895

2850 WASHINGTON BLVD.
BELLWOOD, ILLINOIS

33 GRAND ST.
BROOKLYN, N. Y.

Training the Operator

In training a man for spray finishing, it is a good idea to employ the simplest methods to achieve the goal. A trained operator is the result of a good background in spraying theory as well as actual spraying practice. The spray operator must know his tools and how to use them and he should know something about all of the operations in a finishing department.

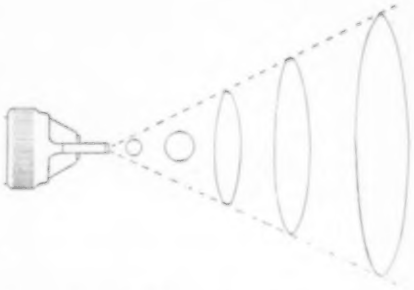
Adjusting Spray Guns on a Circulating System Using Lacquer

A convenient method for checking spray patterns is the use of inexpensive brown kraft paper. After learning to control spray patterns on this paper, an operator can quickly adjust his spray pattern for large or small surfaces while on the job. This method of checking the pattern shows whether it is normal or incorrect. The paper test also shows the wetness of the coating—the fogged as well as the wetted area.

The procedure for pattern test is as follows:

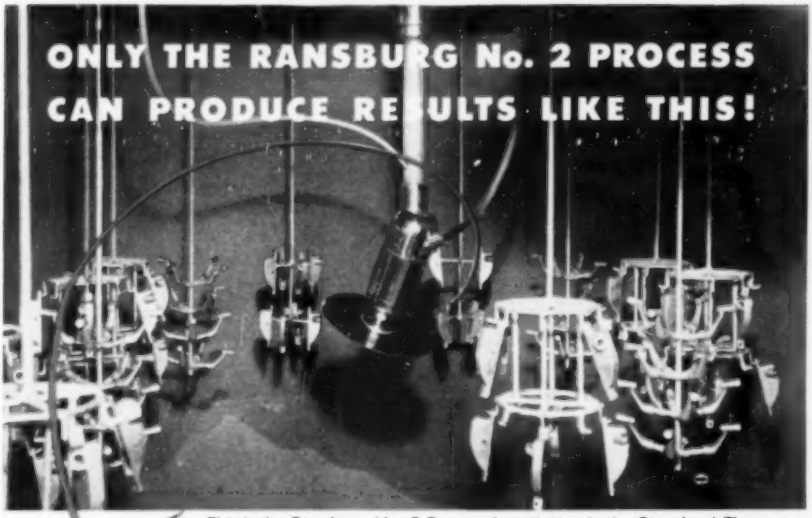
1) A piece of brown kraft paper about 20x30-in. is hung vertically against a flat surface.

2) Close both the spreader or fan control and fluid adjustment valves by turning them to the right. Open the fluid adjustment valve all the way. Holding the gun about 8-in. from the paper and at right angles, trigger the gun and release immediately. If the pattern is not wetting the paper, then increase the fluid pressure slightly. When making the final test, if the pattern is wetting the paper, then increase the fluid pressure slightly. Continue this operation until the paper is flooded slightly. When making the final test, if the pattern is round and wet for about 3½-in. in diameter, the fluid adjustment is right and the spray pattern can now be set by moving the spreader or fan control adjustment valve.



A drawing of spray patterns from a spray gun that is in perfect working condition.

3) Start your cone spray pattern on the 20x30-in. sheet of brown wrapping paper about 4-in. from the left hand edge of the paper. Measure off 8-in. by placing the tips of your fingers on the surface, and placing the gun head on the tip of the thumb, holding the spray gun so it points straight toward the surface. Pull the trigger all the way back and release immediately. After drying for five minutes, the normal cone spray pattern on the front side should look like a round disc about 1½-in. in diameter (solid) with uniformly fogged edges extending out to a diameter of 3-in. to 3½-in. The reverse side of the paper will show a perfect design of the spray pattern, 1½-in. diameter, with the paper stained evenly with a slight feathering edge. A smooth sharp edge would indicate too much



This is the Ransburg No. 2 Process installation in the Standard-Thompson plant, Dayton, Ohio, where electrostatic spray painting eliminated a bottleneck in production of window hardware. The new Ransburg No. 2 Porcess disc-type atomizer is used.

● When Standard-Thompson Corporation revamped their window hardware finishing and assembly plant, they replaced hand spray painting with the RANSBURG NO. 2 PROCESS. And, look what happened!

PRODUCTION DOUBLED—from 500 to 1000 pieces per hour!

PAINT MILEAGE JUMPED 500%—Now they're getting 1500 pieces per gallon of paint where they formerly got 300!

QUALITY IS IMPROVED—They're getting a more uniform coating with NO rejects.

AND, IN ADDITION—They cut paint consumption four-fifths . . . there's a savings in labor and floor space, and maintenance is reduced to a minimum!

Whatever your product might be, if it's painted, and if your volume justifies conveyorized painting, substantial savings may be yours with one of the RANSBURG processes. Write for case history data in your own field.

RANSBURG

Ransburg **ELECTRO-COATING CORP.**

INDIANAPOLIS 7, INDIANA

material; surfaces being sprayed with this much fluid pressure would sag or run. The correct spray patterns with the right amount of atomizing and fluid pressures, will follow in sequence at various dial settings, as shown in illustrations that accompany this article.

Generally speaking, a spray pattern of elongated or fan shape that measures say 5-in. across the long diameter is used for spraying smaller openings, inside corners, etc. One that measures 8-in. or so is used on round or oval shaped articles. The 12-in. pattern is used on the larger flat surfaces.

A quick change of spray fan widths can be made without interferring with production or delaying the spray coating work. When using the procedure described in making the spray pattern on brown kraft wrapping paper, just remember the settings you used on the spreader and fluid adjustments. You don't have to be bothered with regulating the atomizing air pressure, because this is done when making the test cone spray pattern. As you will notice, I have not changed the regulating atomizing air pressure since the start.

Defective Work by Good Air Cap; Causes and Remedies

In supervising a finishing operation I noticed a spray operator applying a finishing coat of lacquer to a large flat surface, and getting a great number of streaks in the work. In checking the gun's air cap, a small piece of dried clear lacquer was found. It probably was overlooked because of its complete transparency.

Using the brown kraft paper test, the operator was shown that the pattern was defective and told about the dried lacquer. The paper test revealed that it was cap trouble because the cap had been rotated 180° and the defect showed in all positions. After cleaning the dried lacquer from the cap, the paper test was repeated and a perfect pattern resulted. If the paper test had been used by the operator before beginning production finishing, he would have saved time and money for his employer.

Editor's acknowledgment:

The Editor wishes to acknowledge valuable help in the preparation and presentation of this article from the following:

Emil F. Frey of The DeVilbiss Co. for preliminary technical assistance and heavy rewrite editing.

William Beacham of Binks Mfg. Co. for supplying technical illustrations and further technical help on the manuscript.

C. A. Windsor Joins Michigan Oven Co. at Detroit

Michigan Oven Co., Detroit, designers and builders of ovens for industrial heating and processing, announces the appointment of C. A. Windsor to the position of Manager of the company's Wire Equipment Division. His appointment signifies another step in MOCO's advancement in this field.

Mr. Windsor brings to MOCO an excellent background that fits him for his new position. For 20 years he has been connected with insulated wire and industrial heating engineering. Mr. Windsor is a graduate of the University of Mich.

when WASHING *means* MONEY

it's "know how" that counts!

The prospector gleaned gold from rock and sand only when he knew how to wash his pan. The same holds true of industrial finishing methods. If you want the finest, call on the specialists—the men who **know how.**

INDUSTRIAL WASHING MACHINES

are designed by expert engineers to meet the exact needs of **your** particular industry. These trained specialists work hand-in-glove with **you** to design and construct the right machine for efficiency and economy. Whether your finishing process is washing, rinsing, slushing, drying, treating with Bonderite, phosphatizing or any combination of these operations, **Industrial Washing Machine** engineers can help you do the job **better.**

Find out **today** how Industrial Washing Machines can help **you.** For illustrated literature write Dept. IF-10.

INDUSTRIAL SYSTEMS COMPANY
Exclusive Sales Agents
for Industrial Washing Machine Corp.
New Brunswick New Jersey

SIC

At last...

A Quick-Detachable Connection that isn't a bottleneck!

Binks new Q-D Connection slashes pressure drop to only 5%!

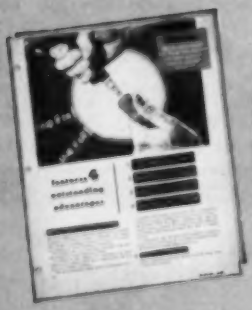
Until now, you may have resisted buying quick-detachable connections for air hoses because of the "bottleneck" they formed. Their advantages didn't offset the pressure drop such connections caused by restricting free air flow.

But now, after months of testing, Binks offers you a Quick-Detachable Connection with *a pressure drop of only 5%!*

The improvement can be quickly seen when you realize that laboratory tests on other standard quick-detachable connections show pressure drops ranging from 21⅓ to 57⅓%!

Beside much lower pressure drop, Binks new Q-D Connection offers four other major improvements for spray finishing guns and other air-operated equipment. Send the coupon for full details.

SEND FOR BULLETIN Q-D



Tells how Binks new Q-D Connection speeds work, cuts fatigue, ends danger of damaging threads on expensive equipment. Includes prices for each of 9 different Q-D assemblies. No obligation. Send coupon or write: Binks Manufacturing Company, 3116-40 Carroll Avenue, Chicago 12, Illinois.

USE THIS HANDY COUPON

Binks
EVERYTHING FOR SPRAY PAINTING

Ask about our school
Provides training in best finishing methods. No tuition. Write Binks for class dates.

BINKS MANUFACTURING COMPANY
3116-40 Carroll Ave. Chicago 12, Ill.

☐ Please rush my FREE copy of Bulletin Q-D describing your new Quick-Detachable Connection.

NAME_____

COMPANY_____

ADDRESS_____

CITY_____ ZONE_____ STATE_____

☐ Send me class dates and other information about your school.

REPRESENTATIVES IN PRINCIPAL U. S. & CANADIAN CITIES • SEE YOUR CLASSIFIED DIRECTORY

Let's Face Facts...

Are You Prepared for a FIRE?

Where the hazards are; some typical fires and what caused them; what precautions to take to prevent fires and what automatic and manual equipment to install to fight small fires.

BY H. H. CONNELLY

FIRE IS THE greatest single destructive force in man's productive life. It is unpredictable and seemingly uncontrollable once it gains the upper hand; therefore, our best defense for controlling this menace is to prevent a fire from starting.

Fire prevention imposes a number of baffling problems in most manufacturing plants, and particularly in woodworking plants where kiln dried woods are in process of manufacture and in storage all of the time.

A finishing room, with its stock of lacquers, thinners, varnishes and paints, is virtually a liquid powder keg—one that if sparked, can be out of hand with an explosive force that defies the best of fire fighting equipment.

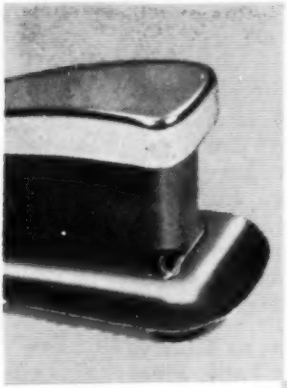
The things just mentioned impress us with the first and most important rule of safety in controlling fires in the finishing room: *Don't let them start.*

Dip Tank Hazards

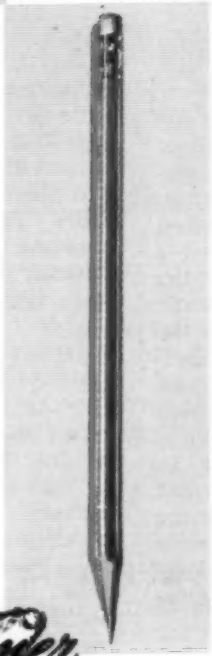
Because dipping, a process of applying finishing material to parts that lend themselves to this method, is economical from the standpoint of labor and material, you will find a dip tank in almost every furniture finishing room. Fire hazards are multiplied because of the inflammable varnishes, shellacs, paints, etc., which these tanks contain, consequently an ounce of prevention here, at the source of a fire hazard, is worth a pound of cure.

The first information that workers in every finishing room should have is a definite knowledge of the flash point of the finishing material used. This is the critical temperature at which a substance will burst into flames. Once a solvent has reached this temperature it bursts into flame at the least provocation. Static sparks produced by running a comb through the hair is as likely to send the whole shebang into flames as an ignited match.

The innocent spark made by letting an iron bar strike a tank caused a fire that consumed 1800 gallons of paint and the finishing



In office supplies too— Nacromer adds "Sales Appealing" luster



Add Nacromer to your office supply products finish and see the difference it makes in beauty.

Nacromer is the low cost substitute for natural pearl essence. It adds "sales-appealing" long-life luster to the finish. It mixes easily with almost any type finish.

Nacromer is ideally suited for office supply products and any other products made of metal, wood or plastic. Tests on your own products—with your own finish—will show the obvious advantages of Nacromer. Ask for a generous working sample today!

Nacromer
A PEARLY PIGMENT

the Mearl corporation

"World's Largest Producers of Pearl Essence"

153 Waverly Place New York 14, N. Y.

room in one factory. The supposedly non-hazardous paint—1800 gallons of it—was lost in the disaster. But tests later showed that the mixture of black asphaltum and solvent had a flash point of 110° F. No special precautions had been made to install sprinklers because of this false sense of security.

Welder's Spark Ignited Tank of "Non-Hazardous" Paint

Another paint room fire was the result of a careless welder burning holes in a new tank lid only 8-ft. away. A molten glow of metal from the cutting torch bounced along the floor and into a tank of paint.

As soon as the fire started, workers attacked the flames with a foam extinguisher. The flame was completely covered with foam and was on the way to being extinguished when an excited workman used a soda-acid extinguisher on the flames. The foam dissipated and the flames began anew. With the supply of smothering foam exhausted by this time, the crew was helpless to control the fast developing heat. Soon the overhead sprinklers went into action but because an overflow drain was not provided for the tank, the water filling the tank forced the light combustible liquids to the top and they soon spilled over the edges, covering the floor with fire.

Water from the plant mains, pumped into the flames by the city fire department, soon exhausted the automatic sprinkler's supply and the flames had a field day of it. Several hours later, when the fire was finally quelled, the roof was gone, productive machinery was demolished, and thousands of dollars worth of material had been destroyed.

A runaway dip tank fire, such as that just described, is one of the most difficult to control. The smoke and heat are severe and unless precautions are made to install the correct type of dipping tank and provide the correct extinguishers, serious damage is likely to result sooner or later.

Precautions to Take to Avoid Dip Tank Fires

Here are a few suggestions which, if carefully observed, will eliminate 99% of the hazard from a dip tank:

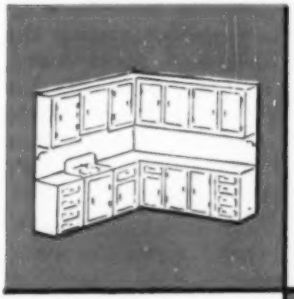
1) A dip tank should be installed in a cut-off location, with adequate ventilation to prevent inflammable vapors from accumulating and spreading to a source of ignition. Extreme cases have been recorded where ignition took place as much as 50-ft. from the tank. The flames just followed the vapor path as they traveled to the dip tank.

2) An automatic extinguisher system should be connected to the dip tank. The instant a flame starts, the heat opens foam or CO_2 extinguishers. In most cases the first is out almost before it began.

3) Install quick-acting drain valves. The object here is to dissipate the liquid as soon as possible. The liquid gone, there is no fuel for the fire.

4) Look for circuit breakers and electric switches in the vicinity of any dip tank. A spark here can cause combustion.

5) When welding and cutting are necessary near dip tanks, all lids



Duranite Enamels —ideal for kitchen cabinets—resist food acids, alkalis, soaps and grease.

Duranite Wrinkle Finishes lend distinction and wearing quality to office and industrial equipment.

Finish by ZAPON®

Zafil® fillers, Aquanite® stains, Zaponite® sealers, and Zaponite® Lacquers—a complete wood-finishing system.

Zapak® Paper Coatings for bottle labels are non-blocking, non-yellowing; resist cracking and abrasion.

ZAPON®

"SERVICE FROM EVERY ANGLE"

Is your product made of wood or metal, paper or plastic? Let a ZAPON custom finish give it a new look. And let ZAPON "Service From Every Angle" choose the right finish, and help you work out the most effective production methods on your own finishing line.

ATLAS POWDER COMPANY WILMINGTON 99, DELAWARE

for Industrial Finishes • Stamford, Conn. • North Chicago, Ill.

should be tightly closed and the room should be well ventilated to remove hazardous vapors.

6) Protect your dip tank with a lid that automatically closes when a flame starts. By a system of counterweights and cables and pulleys that hold the lid open, the lid can be made to close automatically when a heat sensitive link becomes softened and separates by excessive heat.

Value of an Automatic Sprinkler System

It must have been nearly ten o'clock at night when I heard the shuddering whine of a fire alarm. No one likes to hear it. There's always the horrible possibility that it's our house, our property, or our job burning to the ground.

My first look brought relief. It wasn't our house and it wasn't my job. But it was someone's job. A fire was rapidly painting the night skyline a rose-pink. One second it was a faint glow and the next minute it had burst into the night like a surprise Fourth of July celebration. It was a neighboring woodworking plant . . . too far gone to be saved by the time the fire department apparatus got into action. Firemen did well to save the neighboring homes, and the piles of lumber stacked near the factory.

The owner, helpless in the face of the searing heat, calmly told a newspaper reporter that his loss was near a quarter million dollars. Asked if he had insurance, he said "No." The rate was prohibitive—without a sprinkler system, yes. To carry enough insurance to cover his losses, his annual premium would have exceeded $25,000. With an automatic sprinkler system the rate would have been much lower. There was a rueful smile on his face when he stated that he could have put in a sprinkler system the week before for $8000. "I didn't think I could afford it then."

The cold fact about our neighbor's fire is that it probably would not have happened if his plant had been protected by a properly installed automatic sprinkler system—in working condition. He could have forgotten about his insurance and would have been better off by a quarter of a million dollars.

The presence of an automatic sprinkler system is not always a guarantee that a fire will be promptly extinguished, but it is a safe bet that it will hold the fire under control until the fire department can be alerted, arrive, and get set to take over the fight.

What Precautions to Take Around Spray Booths

In your finishing room a sprinkler head should be installed in every spray booth; two or more in large booths. Here is a dangerous spot. In spraying lacquers, a static spark can easily set off the highly combustible atomized lacquer. Unless some force, such as the mechanical sprinkler or a CO_2 automatic extinguishing system is ready to go into action the instant the heat reaches a critical point, the fire may be out of hand before help can be summoned.

Here is a word of precaution for keeping these spray heads in condition to function effectively: Overspray, if allowed to accumulate,

DON'T BE A SPRAY BOOTH SPENDTHRIFT

Records show that improperly maintained booths run up thousands of dollars in unnecessary costs, caused by production shut-downs, extra time for maintenance, spoiled production, unreclaimable paint, and preventable booth repairs.

CUT COSTS with DuBOIS SPRAY BOOTH MAINTENANCE

Here's what you get when you do business with DuBOIS:

Thorough analysis of your operations by trained and experienced personnel. Installation of prescribed specialized compounds:

- **KLARIFIANTS** . . . Water-wash compounds to effectively control overspray
- **FILMITES** . . . coatings for dry areas of spray booths
- **STRYPP** . . . for periodic purging of old paint deposits in the hydraulic system.

FREE . . . spray booth ***maintenance check chart***

. . . yours for the asking, a daily, weekly and monthly program for proper cleaning and maintenance of paint spray booths.

The DuBOIS Co., Inc.

Cincinnati 3, Ohio Los Angeles 33, Calif.

Serving Industry Since 1920

may build up around the heat sensitive sprinkler head, and act as insulation to prevent the heat of a fire from reaching it in time. To avoid any possibility of this happening, tie a small thin paper sack over the sprinkler head. During regular cleaning of the spray booth, remove this sack and replace it with a new one regularly.

Fire Fighting Equipment; Chemical Extinguishers

The importance of adequate and efficient fire fighting equipment cannot be overemphasized. The sprinklers first; this has already been mentioned in detail. Second, see that you have ample hose in good condition and conveniently located.

A few weeks ago a hot rivet dropped from a scaffold and landed in a barrel of collected waste from the finishing room. Unnoticed for some time, used rags in the barrel were smoldering when finally discovered. Plant employees laid a small hose line to the fire and soon had it under control. If it had been necessary to wait for the regular fire department, it could have been too late.

Third, have ample extinguishers in every work area. More than one experience has shown that a squirt in time saves nine. These extinguishers should be the type suitable for controlling a fire of finishing materials and known solvents. A foam or carbon dioxide extinguisher smothers the fire by excluding the oxygen and soon brings it under control.

It is now possible to use dry chemicals for fighting fire. One company has on the market a dry chemical extinguisher actuated by pressurized nitrogen. You can locate these extinguishers strategically in danger zones and when heat occurs in the vicinity, sensitive elements actuated by the expanding air that goes with the higher temperatures, releases nitrogen stored under pressure. The pressurized nitrogen immediately goes to work to scatter the dry chemical compound over the fire through distribution heads. It is recommended for the protection of areas using inflammable liquids such as spray booths, dip tanks, storage, etc.

You can secure the same unit mounted on wheels with 50-ft. of rubber hose for directing the chemical to the danger zone. The carriage, with dry chemical and nitrogen cylinders, is balanced to permit one-man operation.

Controls can be added to even stop operations by closing off the power current. They can be used to drop lids on dip tanks, empty the tank, close ventilation fans and ducts, shut off valves, and perform a dozen necessary operations which, if left to a frightened workman, might not be done.

Spontaneous Combustion; It Really Does Happen

It isn't necessary to strain one's imagination to visualize what could happen if a heap of oil soaked rags should break into flames in the middle of a powder room. Few people realize that the very ingredients they are working with in a finishing room are potential powder kegs. Paints, solvents, lacquers, varnishes and enamels, if fired would transform a peaceful working area into

durability

Durability is a prime necessity to all good finishes. Reliance technical research develops finishes which successfully resist destructive agents which are encountered in actual service. Reliance Finishes are tailor-made for each customer, for the durability problem of one customer, may not be applicable to another.

If you have a finishing problem, we would welcome the opportunity to consult with you without obligation, and to show you how Reliance Research has produced tough durable finishes for others.

Rely on Reliance

Write for our Free "Useful Facts and Figures" booklet. 4732 Crittenden Drive, Louisville 9, Kentucky.

RELIANCE VARNISH COMPANY *Incorporated*

LOUISVILLE, KY.

Affiliated Factories in

CHICAGO, ILL.
LOS ANGELES, CALIF.
ASHEVILLE, N. C.
BRIDGEPORT, CONN.

a blinding, devastating furnace, unquenchable if the few precious minutes at the start were wasted in panic and disorganization.

The finishing plant that has not faced the horror and ruinous effects of fire is fortunate. However, after years of operation without experiencing the misfortune of a fire, there is danger that laxness and complacency will creep into the organization. Then one fatal misstep, because we went to sleep at the post, and a raging fire is right before our eyes.

Sometimes a small fire, if it can be brought under control in time, will prove beneficial. It will awaken everyone and make the personnel acutely aware of the immediate danger of laxness creeping into the observance of safety precautions.

Spontaneous combustion is a phenomenon that everyone admits is possible, but few people have seen it actually happen. A finishing foreman in a small furniture factory had heard of spontaneous combustion, but had no positive proof that it would occur. Like most people he felt that if it did happen it would be in some other plant. He grew careless in pointing out to the men the danger of leaving their used finishing rags and waste in containers overnight. Some of the men even thought a spontaneous combustion was just a talking point that perhaps could be demonstrated in a laboratory experiment.

Oil Soaked Rags Left to Smolder in Container

A few hours after quitting time one afternoon, the watchman stepped into the building and detected the acrid fumes of burning rags. He traced the odor to its source and found a smoldering pile of oil soaked rags in a loosely covered disposal can—a can that was supposed to have been emptied at quitting time but which was overlooked, possibly becaue it seemed unnecessary and would delay some workman in a hurry to get off the job. Quite possibly there would have been no job to return to next morning if the fire had not been discovered in its early stage and extinguished before it could spread to the drums of varnish and lacquer nearby.

The foreman capitalized on this misfortune and used the charred remains as exhibit "A" for many weeks in his argument for cleanliness, and as conclusive evidence that spontaneous combustion could happen in any factory.

For the finisher who is using lacquer, several pertinent facts should be stressed for safety measures: 1) The basic ingredient of lacquer is nitrocellulose, the same material used to make explosives. It is highly combustible. 2) The solvents used to dissolve nitrocellulose have a low flash point and as such are extremely inflammable.

Emphasize Danger of Fire Hazards to Employees

A few common sense measures will remove unnecessary fire hazards if taken in time, and if the dangers are explained to men who operate the equipment and handle the material. These precautions should be stressed from the viewpoint of their own safety as well as for the safety of the plant and their

Tells about

- **FLASH POINT**
- **TOXICITY**
- **DRY TIME**
- **SOLVENT POWER**

This new revised book explains the properties and applications of key organic solvents in non-technical language. 64 pages packed with facts including definitions, comparison tables, testing methods and product description. It is pocket-size for easy reference. To get your free copy write or call your nearest Solvents & Chemicals Group member today.

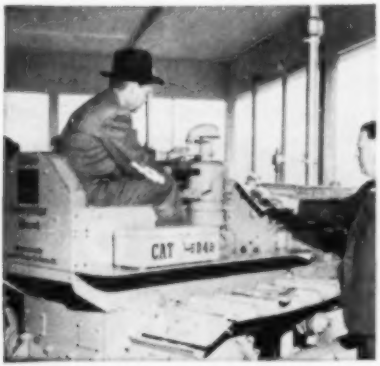
SC Solvents Chemicals Group Member

THE SOLVENTS & CHEMICAL GROUP

Distributors for America's Leading Producers

Consult your telephone directory for the address of your nearest Group member:

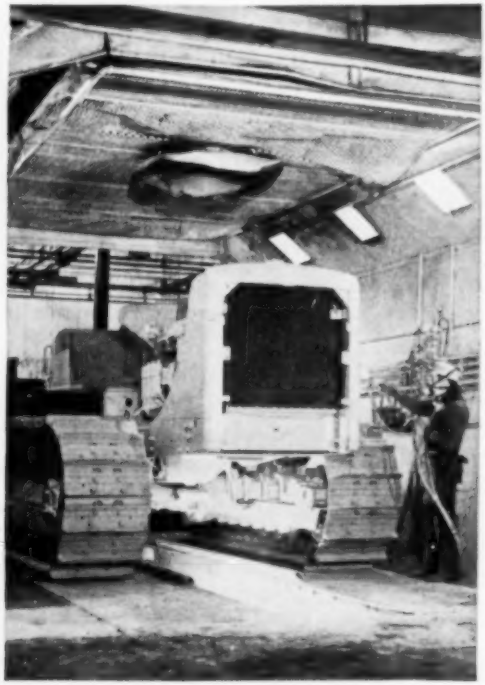
BUFFALO: Buffalo Solvents & Chemicals Corp.
CHICAGO: Central Solvents & Chemicals Co.
CINCINNATI: Amsco Solvents & Chemicals Co.
CLEVELAND: Ohio Solvents & Chemicals Co.
DETROIT: Western Solvents & Chemicals Co.
FORT WAYNE: Hoosier Solvents & Chem. Corp.
GRAND RAPIDS: Wolverine Solv. & Chem. Co.
HOUSTON: Texas Solvents & Chemicals Co.
INDIANAPOLIS: Hoosier Solv. & Chem. Corp.
MILWAUKEE: Wisconsin Solv. & Chem. Corp.
NEW ORLEANS: Southern Solv. & Chem. Corp.
ST. LOUIS: Missouri Solvents & Chemicals Co.
TOLEDO: Western Solvents & Chemicals Co.



SALES. The colorful, sparkling DULUX finish on this tractor helps promote a sale in a dealer's showroom.

PROTECTION. DULUX Tractor Enamel has the toughness to take hard knocks on the job . . . keeps its good looks despite years of outdoor exposure.

PRE-TEST. This guillotine-like device is one of many that help Du Pont develop finishes with high impact-resistance.



OUTPUT. The performance of DULUX helps a tractor manufacturer keep finishing time at a minimum while producing a finish of maximum durability.

DULUX does

REG. U. S. PAT. OFF.

all-round job for tractors

DULUX Tractor Enamel is one of the many Du Pont finishes that have helped manufacturers turn out better products—faster—more economically. In the last twenty-five years, Du Pont chemists have developed more than 12,000 special-purpose finishes like this to serve a wide variety of industries.

Looking for a way to cut *your* manufacturing or maintenance costs? Looking for a finish that will make your product look better, sell better, last longer? You can get expert help on *any* finishing problem by contacting the Du Pont Finishes sales technician in your area . . . or by writing E. I. du Pont de Nemours & Co. (Inc.), Finishes Division, Wilmington, Del.

Du Pont Industrial Finishes

Chemically engineered to do the job *better*

DU PONT

REG. U. S. PAT. OFF.

Better Things for Better Living
. . . through Chemistry

DUCO AND DULUX ARE REG. U. S. PAT. OFF.

jobs. Most humans are conscious of safety practices only insofar as they are closely and directly affected. By emphasizing the personal angle: "I'll be hurt," or "I'll burn down my job," every individual is made more conscious of the dangers close to his own personal safety and income.

The responsibility of proper fire protection for the preservation of property, jobs and the lives of workers, rests in the lap of management. There are several items worth mentioning under the heading of "equipment" that will go a long way toward preventing fires.

What Management Can do to Reduce Fire Hazards

1) Finishing materials, inflammable solvents and oils should be stored in an isolated fireproof building.

2) Electric motors, with possible over-heating and sparking dangers, should be covered or protected and frequently inspected. With the best ventlating system, combustible fumes will, at times, localize in a spot around an unshielded motor.

3) The use of portable electric extension cords that might cause a short when fouled should be prohibited.

4) Vapor proof lights should be used in all parts of the finishing room, especially in and near spray booths where the danger of a broken bulb is accessible to spray fumes.

5) Electric motors and moving parts should be grounded in at least two places. Drums from which streams of lacquer and solvents are being transferred to smaller containers have been known to generate static electricity, causing fires. Such containers should be grounded.

6) The ventilation system should be adequate to change the air completely at reasonable intervals.

7) Only brass or copper tools and scrapers should be used for cleaning a spray booth or for other work in the finishing department.

8) An ample supply of fire-fighting equipment is a must. This should include an adequate automatic sprinkler system, plus carbon dioxide extinguishers placed at points accessible to men in any location of the finishing room.

9) Provide water-wash spray booths for all lacquer applications.

10) An efficient, highly organized fire-fighting department, composed of plant workmen, is always desirable. If these men are selected from the immediate finishing room personnel, that much the better. Frequent fire drills to acquaint the men with the equipment and routine, called at unexpected times, will soon whip a green fire squad into an efficient organization.

With the best of equipment, however, fires are inevitable if proper supervision of the men's working habits and department cleanliness are not constantly supervised and checked. Vigilance should never be relaxed.

Periodic inspection by committees, preferably from other departments, will help keep the supervision awake to any complacency. There are four points which, if watched carefully, will strengthen the chances of preventing a fire.

1) See that all containers for used rags or trash are emptied daily. [*Continued on page 68*]

for color retention on light finishes-here is

CRYSTAL CLEAR LACQUER

WATER WHITE

It's a new, time-tested material for preserving the original color of those beautiful grays, off whites, lime, pearl, sea mist, ermine and all pale, bleached and decorative effects so popular on furniture of today.

Crystal White Lacquer has excellent color retention, and it can be depended upon to protect the surface from the danger of discoloration due to exposure in the store or home.

A free working sample, together with finished wood panels showing the new colors, will be sent upon request. No obligation!

THE SCHAEFER VARNISH COMPANY
INCORPORATED
15TH AND MAGNOLIA LOUISVILLE, KY.

HOW DO YOU PUT A HEAVY PHOSPHATE COATING ON 90 MM. SHELLS?

HOW CAN WE GET BETTER ELECTROCLEANING AT LOWER COST?

Our 200 Oakite Technical Service Representatives answer questions like these every day. We thrive on questions about tank cleaning, machine cleaning, electrocleaning, pickling, preparation for painting, paint stripping, steam-gun cleaning, burnishing, rust prevention and related subjects.

Send us your questions on metal cleaning. There's no obligation. We'll be glad to advise you the best way we can.

FREE Also ask for our 44-page illustrated booklet *"Some good things to know about Metal Cleaning."* Just write to Oakite Products, Inc., 32F Rector St., New York 6, New York.

SPECIALIZED INDUSTRIAL CLEANING

OAKITE

MATERIALS • METHODS • SERVICE

Technical Service Representatives Located in Principal Cities of United States and Canada

2) See that spray booths are properly lined with a material that can be easily removed and replaced periodically. Spray booth coatings are made especially for this purpose.

3) See that work aprons are spread out on benches for drying and not left in a wad or packed away when not in use.

4) See that department floors are swept clean daily, and that walls and ceilings are cleaned regularly. Collections of dust at these points are an explosive hazard when the right conditions are present.

Special Course in Finishing Offered at Northeastern

Northeastern University, 360 Huntington Ave., Boston 15, Mass., in cooperation with the New England Paint, Varnish & Lacquer Association, and the New England Paint & Varnish Production Club, offers an evening finishing course to run from Sept. 22, 1953 to Jan. 26, 1954.

Classes will be held on Tuesday evenings from 7 to 9:30 o'clock with four instructors in attendance each evening. Tuition is $40.00 including application fee.

The purpose of the course is to produce semi-trained men of the coatings industry in laboratory procedure.

R. Offringa Joins Ransburg Electro-Coating Corp.

Ransburg Electro-Coating Corp., (electrostatic spray painting), Indianapolis, Indiana, has appointed Reno Offringa as Sales Engineer for the Michigan and Northern Indiana area. For the past six years Mr. Offringa has been associated with the surface coating industry in technical development and sales. His temporary headquarters will be at his home in Spring Lake, Michigan.

Custom Spraying; Special Spray Gun Adjustments

IN MANY PLANTS, particularly where mass production finishing is done, paint is generally supplied to the spray booths through a paint circulating system. In these cases the atomizing and fluid pressures remain at established levels. In other words, individual spray operators do not manipulate the pressures to suit their personal judgment of what they believe is correct.

This practice is not the case in some shops where individual finishing methods are used. For example, some time ago I was called into a plant on an oven complaint. While waiting for adjustments to be made, I walked over to a spray booth to watch the operator spraying two different parts of a product. This was "off conveyor spraying." He applied the same color material to both parts, but he used two spray guns. I asked him why he was doing it this way.

"One part requires a good wet coat, the other a dry coat," he replied. "For the wet coat I start with 50-lbs. air pressure and keep turning it down until I get just enough to give me a good wet coat. I leave the other gun set at 50-lbs. for the dry coat."

Now this operator was apparently both experienced and skillful. He certainly showed an interest in his work and he was doing a good job.

Later on I thought about this situation. What would happen if this operator became ill, met with an accident, or passed out of the picture entirely? Spray painting isn't my line;

Be sure of your spray booth mask

PROX-PEEL*
SPRAY BOOTH MASK

This formula has, for years, satisfied more shops than any other liquid mask

TIME AND MONEY SAVING
SIMPLE • FAST
COMPLETELY DEPENDABLE

1. Spray on clean booth . . . no paper dolls, no grease daubing!

ADVANTAGES
Ready to use — at normal pressures.
No special reducer or equipment required.
Excellent mileage.
Fireproof film.
Improved illumination.

2. Peel off sheets. No shreds — no scraping!

Demand the original "PROX-PEEL"— the time tested peelable coating . . . plastic based, tough, and free peeling.

ORDER A TRIAL GALLON AT THE DRUM PRICE.

PYROXYLIN PRODUCTS, Inc.
CHICAGO 32

PAOLI, PENNA.
WICHITA, KANSAS

*T.M. Reg. U. S. Pat. Off.

I am an oven man, but it seems logical to me that it would be better to establish correct pressures, both for atomizing and fluid, and then instead of "turning it down to get a good wet coat," start out in the beginning with the correct air pressure. If necessary use two or three spray guns. A uniformly, trouble-free finish is worth it. —*C.B.*

How Much Should You Know About Materials?

A PAINT SALESMAN once confided to me that he preferred doing business with men whose knowledge of paint was limited to application, not manufacture or composition. His theory was that "a little knowledge is a dangerous thing," and he felt that too often they made demands upon him for products that were not properly evaluated.

On the other hand, most salesmen prefer foremen and purchasing agents who keep themselves well informed on all of the latest materials and methods involved in the finishing products which they buy. They recognize the fact that it is much easier to calmly evaluate both virtues and limitations of a product with the well-read buyer.

Both schools of thought have a good point. Certainly, a man can be an excellent finisher or foreman without ever concerning himself with what the products contain, or how they are made. Conversely, there are thousands of men whose ambition or curiosity drives them to learn every possible detail of anything that applies to their work, no matter how remote it may be.

The effect of this curiosity in the finishing field con be both good and bad. It is good in that it creates interest and forces the finishing materials manufacturers to keep on their toes and properly evaluate each new product, lest they be left behind. It is bad if it creates pressure for unwise or premature acceptance of a product before it is ready.

Like the medical profession, the protective coating manufacturers and users are searching for miracles. Each new material or process is launched with understandable optimism and hope. Some do prove to be genuine miracles, but miracles with very definite uses and very definite limitations. After a time, they settle down to the services for which they are best suited.

Unfortunately, it is usually easier to detect virtues than faults in finishing materials. Faults have a habit of cropping up only after long or unforeseen aspects of service. So, the success or ultimate worth of a new product is often marred by its failure on many products for which it was unsuited.

All concerned would have been spared much grief if a little patience and a long, careful look had been exercised.—*George A. Conrad.*

Sherwin-Williams Industrial Men Met in Chicago in September

At a meeting of the Sherwin-Williams Co. Industrial Representatives, held in the Windemere East Hotel in Chicago, Monday and Tuesday, September 28th and 29th, Mr. Don S. Gaarder, General Manager of Industrial Sales, reported a gain of over 16% in gross industrial sales.

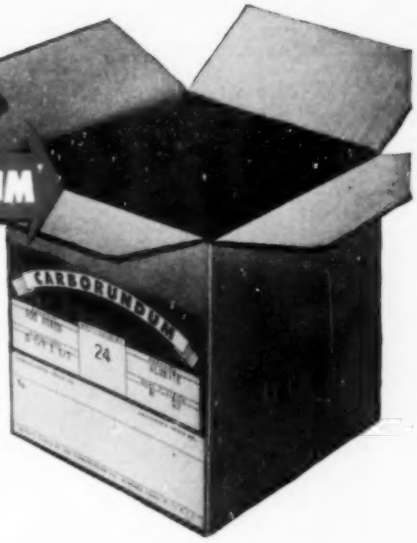
Present, in addition to the 35 sales representatives were, Paul Bewie, Western Regional Manager; Wynn Everett, Southwestern Regional Manager; Gene Herzog, PMI Sales Manager, and Frank E. Ehrett, Great Lakes Industrial Zone Manager.

Research projects and new products, including heat resisting finishes and industrial emulsions were demonstrated by a group of industrial technicians, headed by Richard Moore, Francis Thomas, Ken Brown and Robert Albrecht.

This meeting was planned and conducted by C. F. Harris, Manager Industrial Sales for Western Zone, who expressed confidence that sales would continue to expand during the coming year.

NOW...

Sander Discs by CARBORUNDUM



Packaged to save you time and money *on the job* and in the *storeroom!*

Fast-cutting, long-life CARBORUNDUM Brand Sander Discs now bring you extra savings —give you *more for your dollar!* Here are the reasons:

NO BALING TO DAMAGE DISCS

No straps to damage disc edges—or to weaken the fibre by pressure-forcing grain into backing.

MOISTURE RESISTANT SEALED PACKAGE

Maintains proper moisture content in each disc to give you top performance in use. Keeps out excess humidity in transit and storage.

EASIER TO OPEN...EASIER TO STORE

No wire cutters needed. Boxes stack easily and square on shelves or pallets. Why put up with lopsided stacking of bales—with loose unbaled discs—with hard-to-see labels? They all slow down production...waste labor...cost money.

CALL YOUR CARBORUNDUM DISTRIBUTOR or salesman today. He offers a complete line of sander discs for every sanding job. He'll gladly help you select the right combination of discs and sander pads to save time and money on the production line...and in handling and storage. You'll find him listed in the yellow pages under "Abrasives" or "Grinding Wheels." Or, if you prefer, write to The Carborundum Company, Dept. IF 82-525, Niagara Falls, N. Y.

CARBORUNDUM

REGISTERED TRADE MARK

...continually putting more cents in your abrasive dollar!

82-325A

World's Largest

Thousands of gallons of industrial finishes are supplied by The Forbes Division to General Fireproofing Company for metal office equipment.

Bright aluminum chairs receive a spray coating of Forbes' clear synthetic enamel as they move around a circular conveyor at the GF plant.

PG PITTSBURGH

PAINTS • GLASS • CHEMICALS • BRUSHES

PITTSBURGH PLATE

Maker

Of Metal Office Furniture

Uses Pittsburgh Enamels

Tough, long-lasting finishes add beauty and durability to modern, streamlined equipment made by General Fireproofing Company

THERE is no better proof of the quality and performance of Pittsburgh Industrial Finishes than the continued use of these famous coatings by outstanding manufacturers.

For instance, the Forbes Finishes Division has furnished the General Fireproofing Company of Youngstown, Ohio, Pittsburgh Industrial Enamels for many years to make its products look better and last longer. Recognized as the world's largest manufacturer of metal desks and office chairs, General Fireproofing is famous also as the maker of one of the finest complete lines of steel and aluminum furniture for trains, buses, steamships, hotels, banks, and other installations.

By working with GF's technical and engineering staff, Pittsburgh has produced high quality enamels to meet General Fireproofing's finishing requirements. These coatings provide exceptional adhesion, toughness, and durability. Because they are so easy to apply, they speed up production and save manufacturing costs.

PITTSBURGH PLATE GLASS COMPANY
Industrial Paint Div., Pittsburgh, Pa. Factories: Milwaukee, Wis.; Newark, N. J.; Springdale, Pa.; Atlanta, Ga.; Houston, Texas; Los Angeles, Calif.; Portland, Oregon. Ditzler Color Div., Detroit, Michigan. The Thresher Paint & Varnish Co., Dayton, Ohio. Forbes Finishes Division, Cleveland, Ohio. M. B. Suydam Div., Pittsburgh, Pa.

Free Advisory Service

General Fireproofing is just one of many manufacturers with whom Pittsburgh has worked in developing highly specialized finishes. This broad experience may be helpful in saving you time and money. Write, wire or phone the Pittsburgh Paint plant nearest you. We'll be glad to have one of our engineers discuss your finishing problems with you at no cost or obligation.

PAINTS
PLASTICS • FIBER GLASS
GLASS COMPANY

Flow Coaters; Stripers

We have just received our first copy of *Industrial Finishing* and are very much impressed with the information contained in it. From reading this magazine we gather that if we want to know anything, and if at all possible, you will so advise us.

First, we are interested in flow-coating small units. We manufacture corners. These are simply right angle pieces of metal with a total girth of from 4-in. down to 1¾-in. These units are usually from 12-in. to 15-in. long. We feel that flow-coating would lessen the fire hazard, but we are not familiar with anyone who makes machines for this operation.

We are also interested in a striping tool that would stripe right angle pieces of metal, or corners, which would be 12 or 14-in. long, somewhat similar to a sample we are sending you. The stripes may be all the same widths and possibly not quite as heavy; but we would like to do this complete corner at once after it is formed. Can you give us the name of a concern that manufactures striping mechanisms?—*B.Mfg.Co.*

In a letter to you, we are naming manufacturers of flow coating machines and striping tools.—*Editor.*

P. O. Ban on Aerosol Cans Is Still On!

On page 112 of Sept. issue, we notice an item that reads as follows:

"The Post Office Department has withdrawn its ban on mail shipments of paint products in aerosol cans."

I checked with the Post Office Department today and was advised that the ban is still in existence. The problem of removal has been submitted for consideration, and a decision is expected within the next 30 days. I understand that one manufacturer of paint products has been granted permission to use the mail until this problem is finally determined.

I thought you would be interested in the above, and I will be happy to advise you when the Post Office issues its final determination.—*William G. Gittens, Ass't. Counsel, National Paint, Varnish & Lacquer Association.*

Graining Rollers

Have you a list of suppliers that manufacture graining rollers? We are interested in obtaining information on these rolls.—*E.V.Co.*

Several concerns can supply them; in a letter we are giving you their names and addresses.—*Editor.*

Tumble Finishing Turnings

We are interested in the technique of finishing small wood turnings; staining, tumbling, etc., and will appreciate any literature you may have available along this line, or names of any sources of supply where such information is available.—*V.S.Co.*

In going through May 1953 issue, I notice (on page 88) that the Lupoline Automatic Polishing Equipment Cor-

Enamels • Undercoats

Fine Enamels and Undercoats made in all types. Air drying or baking. For wood or metal. Spray, dip, roller-coat, screenprint, squeegee or brush application.

•

STAINS

GLAZES

FILLERS

LACQUERS

SEALERS

SHELLAC

•

SPECIALTY FINISHES

•

Industrial Finishes for Application by All Methods

•

• IN STEP WITH THE TIMES •

JAMES B. DAY & CO.

CHICAGO 14

poration manufactures tumbling barrels, but you do not give its address. Would you please forward this information? Also, the name and address of any other manufacturers of tumbling barrels?—*S.Co. (Toys).*

Information furnished.—*Editor.*

"Newest thing on the market: green paint with a chlorophyll base!"

We Have Zolatone

A recent issue (Sept. 1953, page 70) contains an inquiry from B.B.Co. concerning Zolatone, our multi-color plastic paint. By separate mail we are sending you some technical information about this material.

If you will advise us of the location of B.B.Co., we will communicate with them directly. — *Paramount Paint & Lacquer Co.*

The inquiry specified *Zolonite*, a non-skid coating material. In a letter we are giving you B.B.Co.'s full name and address.—*Editor.*

We'll Take Small Orders

On page 76 of Sept. issue we notice an inquiry from X. Co. on small quantity business... We are fully equipped to give 2-day delivery on any lacquer color. We can make this material in high gloss, semi-gloss or flat, or whatever sheen the customer wants. We will give customer a formula number for his material and also hold a wet sample of anything we manufacture in case there is a repeat order.

We have been filling orders for any quantity from a gallon up, during the past 17 years in the Philadelphia area, with remarkable success. Some of our original gallon customers are now two and three drums per week accounts. We will take care of your inquiry promptly and ship our material with a clause that it can be returned if customer is not satisfied with our color matches.—*Pennsylvania Lacquer Center.*

Industrial Vacuum Cleaners

Could you send me names of firms making vacuum cleaners which are used in cleaning the inside of paint baking ovens? In reading your magazine, I have seen mention of vacuum cleaners for this purpose several times.—*B.Mfg.Co.*

Names and addresses given.—*Ed.*

What to Mix in Paint to Make It Show

We are looking for a source of information on an ingredient that can be mixed with paint that will show infra-red or ultra-violet rays, and which will not be harmful to the hands. When an artist is painting with black on black it is difficult to know what has been painted, and if we could get information as to whom

CLINCO

PIONEERING QUALITY INDUSTRIAL FINISHES SINCE 1928

Finest Quality Enamels for ELECTROSTATIC SPRAYING Applications

CLINCO experience and proven know-how on this highly specialized process are yours for the asking. We'll gladly work with you on any problems.

Customer Service is Our No. 1 Concern

THE CLINTON COMPANY

1210 ELSTON AVE. • CHICAGO 22, ILL.

we might contact regarding our problem it would be very much appreciated.—*E.C.Co.*

In a letter we are naming a few concerns who may be in position to supply such a material.—*Editor.*

Silk Screen Stencils; Supplies

Please send names of two or three of the leading manufacturers of silk screen.—*T.C.Corp.*

Information supplied by letter.—*Ed.*

July Articles Wanted

Please send us three copies each of articles appearing in the July 1953 issue of *Industrial Finishing.* These are, "Flexible Conveyor System for Finishing Fine Furniture," pages 50 to 58, and "Learn to be Your Own Trouble Shooter," on page 82.—*P.O.*

Copies sent.—*Editor.*

"Where's Mr. Spiegelman? He was here just a moment ago."

We Have Non-Skid Paint

We notice, on page 71 of Sept. issue, an inquiry relative to a so-called Non-Skid Coating called "Zolonite," by the B.B.Co.

Our product is not called "Zolonite," but it is a phenolic non-skid coating which has been used over the past 11 years by various branches of the armed services, as well as by industrial maintenance engineers, as a remedy for slippery surfaces where safety is a factor.

Not knowing who this company is, we are forwarding you our literature concerning the performance of our product "Kor-Dek Non-Skid," which we market nationally. We also make this product in a Vinylite Coating.—*Smith-Corwin & Co.*

Reclaim Sludge in N. J.?

We would like some information as to who, in the New Jersey area, reclaims synthetic enamel sludge.—*J.*

Only one we know of, at the moment, is Solvents Recovery Service, Inc., 101 Central Ave., Westfield, N. J. —*Editor.*

Tumble Cleaning; Painting

We have a problem of tumbler cleaning small parts, and want to find a machine in which we can complete the cleaning operation by adding a paint finish. Please advise if you know of a manufacturer of this type of machine or if you can suggest where such a machine can be located. —*W.B.Co.*

In Sept. 1953 issue, we noted, on page 74, that you supplied information to one of your readers with reference to tumble finishing. [*To page 80*]

Crystal Clear

PERFECTION SYNTHETIC FLAT FINISHES

No distortion . . . no cloudiness . . . and a wonderful WAXED EFFECT with HAND RUBBED APPEARANCE

You'll be amazed at the difference in finished appearance . . . the full beauty of woods and grains . . . the ease, convenience and economy . . . when you use PERFECTION FLAT FINISHES. A grade to suit each budget and drying time. ***Write for samples.***

SEE THE DIFFERENCE *FEEL* THE DIFFERENCE

Perfection **PAINT & COLOR COMPANY**

INDIANAPOLIS 2, INDIANA

We too are interested in a copy of the article mentioned, as well as the names of manufacturers. Our problem concerns . . . small steel items and aluminum parts.—*P. & K.*

In a letter we are naming several manufacturers of tumbling barrels or machines.—*Editor.*

Drum Storage Racks

On page 100 of Sept. issue, we notice a paragraph about drum storage racks, K.D. Will you please let us have the name of the manufacturer of this equipment?—*D.Chem.Co.*

It's Ainsworth Mfg. Co., 1471 E. Atwater St., Detroit 7, Mich.—*Editor.*

Sprayed Insulation

On page 98 of your Sept. issue, in "Random Comment," you mention a sprayed insulation for metal that protects against short duration high heat. Can you give us further information as to who manufactures this product and possibly literature on same?—*Stewart-Warner.*

It's a product of B. F. Goodrich Co., Industrial Products Div'n., Akron, O. —*Editor.*

Our "Peel-Off" Stands Bake

In Sept. 1953 issue, page 74, we notice that the F.S.M.Co., is interested in obtaining a sprayable or brushable peel-off type of masking coating that will stand baking.

We are in position to supply such a material and we would appreciate your advising F.S.M.Co. of our name and address, or giving us the name and address of the company so we can give them complete information on our product.—*Chem.-Tech Industries.*

Name and address given by letter.

Zinc to Gold Color

On page 90 of May 1953 issue, there was one small paragraph entitled, "Zinc to Gold Color." We are interested in looking over any information along this line that you are able to send us. The finish would be an enamel or lacquer application.—*W.C.*

Names and addresses of companies who can supply finishing materials for this purpose have been sent to you by letter.—*Editor.*

Temporary Protective Coating

We have a requirement for a temporary peel-off coating on stainless steel sheets for shop fabrication. This coating should provide the protection required for normal shop handling of all types of stainless steel sheets with a No. 4 to No. 7 finish. Please send us the names of concerns that produce such a coating.—*G. Mfg. Co.*

Information supplied.—*Editor.*

Paint Meter Offered

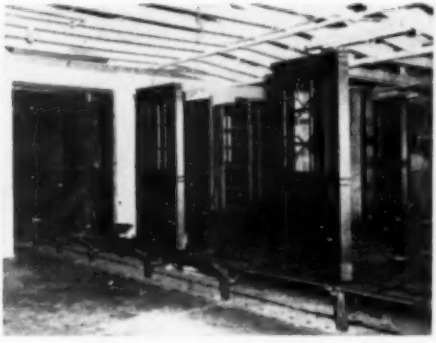
I have just read the inquiry entitled "Meter Wanted" on page 76 of September issue.

As New Jersey representative of Ralph N. Brodie Co., I have served as "meter man" to many concerns in this area. . . . The Brodie meter can meter anything pumpable and maintain an accuracy of one tenth to one half of 1%. Units come equipped with temperature compensators, automatic shut-off devices, air eliminators, strainers, flow control valves, remote reading counters, barrel filling counters and many other accessories . . . . —*John A. Savage, Newark, N. J.*

A CHALLENGE . . .

TO MANUFACTURERS WHO HAVE THE HIGHEST QUALITY, MANY-PROCESS, CAREFUL, SHORT OR TIME-TAKING FINISHING SCHEDULE and/or A GREAT VARIETY IN SIZE AND WEIGHT OF PRODUCT TO FINISH . . .

To request a free engineering layout. Permit us to demonstrate that DeBurgh powered systems alone are flexible enough to do the job!



"Designed by a Furniture Manufacturer FOR Furniture Manufacturers"

Investigate!

DeBURGH CONVEYORS, Inc.

Pat. Nos. 2317675, 2640580, 2640607

1741 K St., N. W., Washington, D. C.

HOT SPRAY LACQUERS

It is well-known, now, in most of industry concerned with finishing, that HOT SPRAY LACQUER has some outstanding advantages.

It covers better, dries faster, and is better adapted to conveyor-system spraying. All these features mean *lower finishing costs.*

ROCKFORD VARNISH is a first-class source for all types of Hot Spray Lacquers. Our laboratory sets rigid standards for formulation, using only the best of materials, and accurately prescribing the mixture to perform as you wish under the conditions in your plant.

Thus, from Rockford Varnish, you can be assured of top quality to suit your requirements. Give us the word on what you need . . .

Research, Quality, Service

ROCKFORD VARNISH *Company*
ROCKFORD, ILLINOIS
Manufacturers of Protective and Decorative Coatings

Affiliate
GORDON BARTELS CO.
Roller Coating Specialists

Gleaming

Beauty — in products as in people — is sometimes a special "glow" that seems to come from within, to cast its radiance upon all who see. And such is the beauty of a truly fine product, built to exacting standards and finished with a coating created for that product alone. Manufacturers wisely seek that beauty for their own quality merchandise, by turning to specialists for help. Within our laboratory, a complete staff of experts is constantly at work developing individualized finishes for a wide variety of manufactured items. We invite you to submit samples of your own products for recommendation.

Research, Quality, Service

ROCKFORD VARNISH *Company*
ROCKFORD, ILLINOIS
Manufacturers of Protective and Decorative Coatings

Affiliate
GORDON BARTELS CO.
Roller Coating Specialists

To Paint Bevel Edge On Acoustical Tile

We have a finishing problem which we hope you or some of your readers may have the answer to. We manufacture, among other things, acoustical tile, a sample of which we are mailing you.

This material, in large sheets about 4x12-ft., goes through a roller coater and has the face side painted. Then it goes through a drying oven on a conveyor. It is then cut into over-size blanks 12½x12½-in. on a multiple saw machine. These blanks are then fed through a machine which trims them to the finish size of 12x12-in. and at the same time, cuts a 30-degree bevel on the face side. This bevel, when two boards are butted together, as in application, forms a V at the joints.

Our problem is the painting of this bevel. We understand that some manufacturers of this product have a gravity feed flow coating arrangement on the tile machine and the edges are painted as the tile comes through this machine. The fact that the board must be run through the machine face down makes the problem much more difficult.

If you or any of your experts or readers have an idea that may help us solve this problem, we would certainly appreciate hearing from you.—*F.P. Co.*

I suggest that you mount two rollers, one on each side at the outfeed end of the machine that cuts the blanks to finish size and bevels the edges. These rollers would be mounted at the same angle as the bevel edge, and their under sides would operate in a pan or bath of the same paint with which you coat the face of the tile. These rollers could be mounted with a slight spring tension which would allow for any slight misalignment of the piece coming through, and at the same time this tension would be sufficient to hold both rollers in contact with the beveled edges.

Whether these rollers should be of smooth metal or a composition roller, such as is used on some roller coating machines, would depend on the type and viscosity of the material with which you plan to coat the edges. I believe that enough finishing material would be picked up by the revolving rollers to coat the beveled edges.

These rollers would have to be power driven. Also, the open pan or bath in which the roller operates would have to be placed far enough away from the cutters to keep out the composition dust, or the exhaust would have to be increased so that the paint would be protected from this dust.

If this does not prove satisfactory, there are rollers available in which the finish material is piped inside the roller from a 5-gallon can by gravity. These rollers have many small openings in their contact surface through which the paint flows and is applied by contact to the surface to be painted.

There is still another method: Mount the two rollers at the correct angle, at the outfeed end of the trimmer, and immediately above each roller, erect a shelf to support a con-

BOILING WATER, applied continuously for 3 minutes! United's FORMILAC softens and whitens slightly, but white disappears in 1 minute—hardness is recovered in 15 minutes. No gloss lost.

NAIL POLISH REMOVER & PERFUME! FORMILAC softens slightly. Recovers hardness two hours after remover (or perfume) evaporates. No gloss lost.

COLD WATER! FORMILAC does not change in gloss or hardness after 4 hour exposure.

BOILING 5% SOAP SOLUTION, applied hot! FORMILAC does not change in gloss or hardness after 2 hour exposure.

ALCOHOL-WATER MIXTURE (50-50)! FORMILAC softens slightly. Recovers hardness as mixture evaporates. No gloss lost.

THESE AND OTHER TESTS prove United's FORMILAC low bake Clear Synthetic finish superior to typical furniture lacquers in performance. And, production runs show FORMILAC gives greater mileage—235 square feet per gallon compared to 140 sq. feet for a typical wood lacquer.

WRITE TODAY for complete details and a generous working sample—you'll be convinced of its exceptional advantages.

Complete Research Facilities AT YOUR SERVICE

If you are faced with a special finishing problem, the United laboratory will gladly assist in finding a solution. These research facilities are always at your service to help make a better product.

PAINTS · SYNTHETICS · UNITED · LACQUERS · ENAMELS

United LACQUER MFG. CORP.

LINDEN, N. J. PHILADELPHIA 19, PA.

tainer to hold the finishing material. This container would have a faucet at the lower edge through which a controlled stream of paint would flow down onto the revolving roller. This type of setup would have a pan or container below each roller to catch the excess paint so it could be returned at intervals to the container on the shelf for reuse. Some of the venetian blind roller coaters use this type of feed. In this case the viscosity of the material would have to be checked at regular intervals, especially if you use an oil-base coating, because the stream of paint is exposed to the air which allows the solvent to evaporate.

A heat-resistant paint that retains a neat appearance, even after hard usage, has been developed for use on the exhaust manifold of Lincoln's V-8 205-hp. overhead valve engine. This finisher is spraying a silicone-base, black, heat-resistant paint designed to withstand heats of 1000° F. on an exhaust manifold in the Dearborn engine plant of Ford Motor Co. Photograph, courtesy of Midland Industrial Finishes.

One man has suggested two fixed air brushes mounted at the correct angle at the outfeed end of the trimmer to coat the bevel edge. The spray pattern would have to be controlled to about ¼-in. In this case some of the overspray might contact the flat, finished surface and show. Also, there would be some loss through overspray.

You will probably have to do some experimenting before you hit upon a satisfactory arrangement for doing this job.—*P. C. Bardin.*

Dip Coating Trouble

We are a new firm and have run into some painting problems. We are trying to dip an ⅛-in. sheet of Duron board into lacquer. This is a dark brown composition board, very hard and smooth; size of the sheets 16x32-in. We are not having satisfactory results, running into a lot of streak marks. We would appreciate any information you can give us as to the proper equipment and proper application for this job. We are sending you a small piece of Duron board so that you will know exactly what it is.—*C.F.*

These smooth hard flat sheets are not well adapted to dip coating. I suggest you arrange to paint them by spraying (manual or automatic) or roller coating. In either case, I recommend that you take up the matter with your paint supplier so you will get a suitable paint material of the right viscosity for the job, depending upon which method of paint application you decide to use.

If you still have trouble, consult the manufacturer of Duron board. Some of the firm's other customers have probably had trouble painting the sheets, and very likely the manufacturer has specific information on the subject.—*H.M.*

MEET
The *Man* Behind The Man Behind <u>Your</u> Spray-Gun

SYNTHETICS
•
VARNISHES
•
LACQUERS
•
ENAMELS

. . . Whether your finishing problem is to develop a coating to add life and durability to your product . . . one to perk up sales appeal . . . a system to cut production costs, or a formula to meet exacting defense work specifications . . . it will pay you well to get acquainted with an Egyptian Industrial Finishes Specialist . . . he's the man behind the man behind your Spray Gun.

Your Egyptian Industrial Finishes Specialist can keep you constantly informed of the developments of new finishing techniques and how you can benefit by them. He can tell you why it would be more advantageous to coat your product by the dip, spray, tumble or roller coat application method. He knows and can tell you the required specifications for finishing any government product.

Put this highly specialized knowledge to work for you!

Invite an Egyptian Industrial Finishes Specialist to call on you today.

EGYPTIAN
INDUSTRIAL FINISHES

The EGYPTIAN LACQUER MANUFACTURING CO.

BOX 444, NEWARK 1, NEW JERSEY

Plants: South Kearny, N. J. • Lafayette, Ind.

S-W Water-Reducible Enamel "Refuses to Burn"

A new water-reducible industrial enamel that "refuses to burn" at normal operating temperatures is announced by the General Industrial Division of The Sherwin-Williams Co., Cleveland 1, Ohio.

Designed for application on metals, the finish is an emulsion type enamel in which water is employed both as an ingredient and a reducing agent.

New water-reducible industrial enamel won't burn while it is in liquid form.

The coating's qualities, it is said, meet the requirements of the automobile, electrical and many other metalworking industries. Although it is water-reducible in the application process, it is not water-soluble after application and its oil resistance is excellent. Its glossy finish is very hard, with high impact resistance. In performance it compares with any of the existing finishes for industrial metal products.

It is impossible to ignite the finishing material in the liquid state at normal room or operating temperature, because it refuses to burn. After application and drying, the finish becomes combustible but in a limited degree, according to the company.

At the present time the finish is produced only in black, but it can be made in a range of colors. Consumer demands will determine the colors in which it ultimately will be offered.

Qualities cited for the new emulsion enamel include these:

It is non-inflammable at normal room or operating temperature, even if exposed to flame.

It is formulated either for dip or spray application.

Its hardness, impact resistance, adhesion properties and resistance to oil film are excellent.

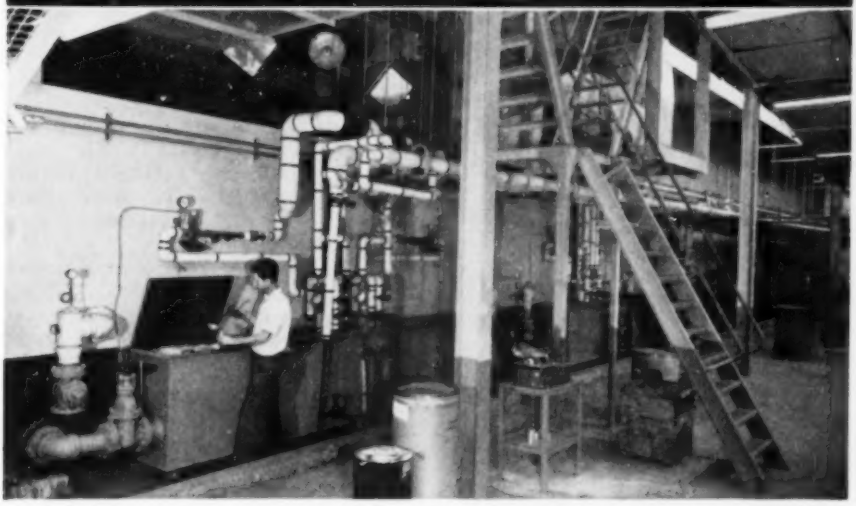
It provides an attractive, high gloss finish.

Industrial units already coated with the enamel can be machined or fabricated without damage to the finish or to cutting tools.

The use of water as the reducing agent results in substantial economy compared to conventional finishes to which organic solvents are added.

After application the enamel is air-dried for 20 minutes, then baked for approximately 18 minutes at 300° F.

"ENGINEERED" EFFICIENCY*



*BUILT INTO YOUR COMPLETE METAL FINISHING SYSTEM BY KOCH

KOCH BUILDS:

- BAKING OVENS
- SPRAY BOOTHS
- METAL WASHING EQUIPMENT
- COMPLETE FINISHING SYSTEMS FOR BOTH WOOD AND METAL
- AIR MAKEUP SYSTEMS

Efficiency that produces a better product at lower cost is an integral part of every complete finishing system engineered and installed by KOCH.

This statement is backed by hundreds of installations in America's largest industries during the past 80 years.

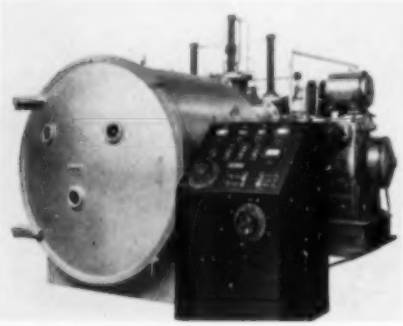
Let a KOCH engineer appraise your finishing problems now.

WRITE FOR FOLDER F-10

GEORGE KOCH SONS, INC.
EVANSVILLE, INDIANA

New 72-in. Vacuum Metallizer

Compactness in the layout of the vacuum pumping equipment and a high degree of automation in the control system, with interlocks to guarantee safety and dependable operation, are design features of the new 72-in. vacuum metallizing unit developed by the F. J. Stokes Machine Co., 5500 Tabor Road, Philadelphia 20, Penna. The first of the new units, largest ever built for metallizing on an industrial production scale, has been shipped to the Jayron Corp., Leominster, Mass.



New Stokes 72-in. vacuum metallizing unit.

Rapid pumpdown of the chamber, which is 72-in. in diameter and 60-in. long, is accomplished by a Stokes 3-stage pumping system . . . The three diffusion pumps are directly connected to the rear face of the metallizing chamber, without a manifold. In addition to contributing to the compactness of the layout, this arrangement provides for a more rapid and efficient pumping cycle. The pumping system, working as a unit, can evacuate the empty chamber to a pressure of one-half micron (normal working pressure for metallizing) in 7 minutes.

When the pressure has been reduced to one-half micron, the chamber is ready for flashing the filaments and depositing the metal coating on the parts to be plated. The filament-heating current can be raised to the flashing-point and held there for the proper length of time either by an automatic flashing cycler or by manual control. Further information can be obtained by writing the company.

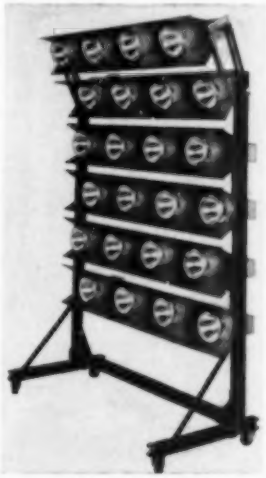
Portable Infrared Panel

Op-Al "Caloray" infrared baking panels are available in various sizes to accommodate individual paint shop requirements.

Upper section of the panel is hinged and readily adjustable. Each 8-lamp section is controlled by an individual switch, making it possible to direct heat to selected areas without operating the whole unit.

Triangular grouping or staggered positioning of heat lamps provides an even distribution of heat over the entire surface exposed.

These panels come equipped with 125 W. R.-40 heat lamps. Construction of all units is in conformity with national electric code standards, and

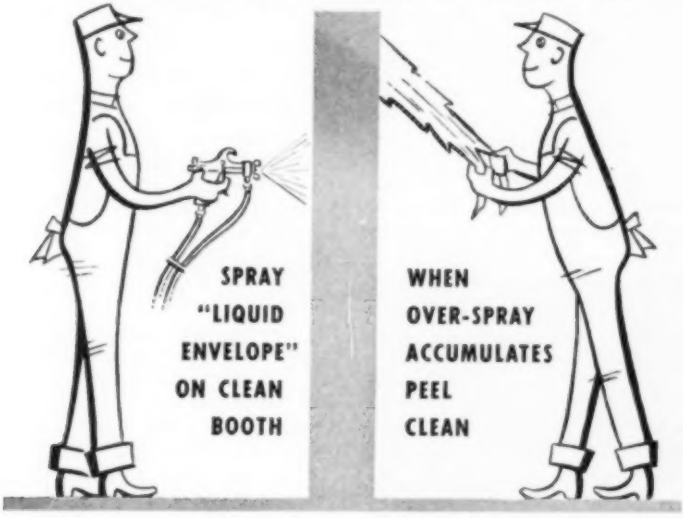


Portable, adjustable, convenient, effective.

easy way to keep booths clean

"LIQUID ENVELOPE"

STRIPPABLE PROTECTIVE PLASTIC FILM



That's all there is to the simple, labor-saving, inexpensive "Liquid Envelope" way to keep booths firesafe, better illuminated, better ventilated. Costs far less than the outmoded hand-scraping or grease-papering methods. ***New Users:*** Order a 5 gallon Test-Sample at the drum-lot price. Hundreds of steady users found out that way. Why not you?

BETTER FINISHES AND COATINGS, INC.

268 Doremus Avenue, Newark 5, N. J. • 122 East 7th St., Los Angeles 14, Calif.

DISTRIBUTED BY

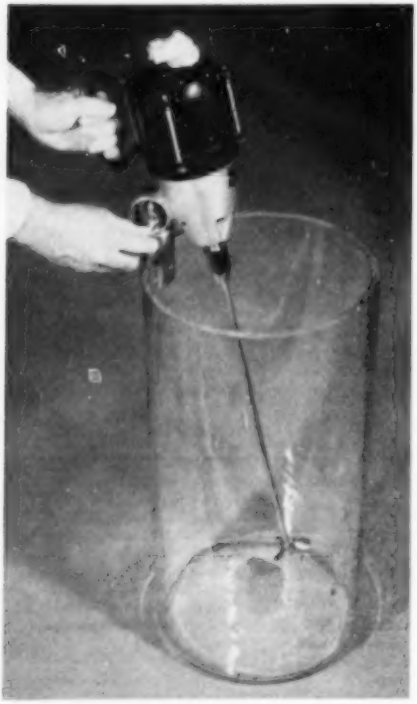
Abrasive & Supply Co., Detroit, Mich.
Aviation Lubricants Co., Inc., San Diego, Calif.
Bay State Spray Equipment Co., Springfield, Mass.
C & H Supply Co., Seattle, Wash.
The Dean & Barry Co., Columbus, Ohio
Eastern Spray Equipment
c/o Mitchell-Love, Philadelphia, Pa.
Edgcomb Steel of New England, Inc., Milford, Conn.
Eley's, Newport News, Va.
Finishing Equipment & Compressor Co.
Kansas City, Mo.
John Henry Foster Co., Minneapolis, Minn.
Franklin Supply Co., Providence, R. I.
General Spray Equipment Co., Boston, Mass.
H. J. Gettemueller Co., Inc. Baltimore, Md.
Globe Chemical Co., Louisville, Ky.; Cincinnati, O.
Grupek Co., Newark, N. J.
Harston Chemical Corp., Brooklyn, N. Y.
The Hubbard Co., San Francisco, Calif.
Kellermann Paint Co., New York, N. Y.
Koehler Rubber & Supply Co., Cleveland, Ohio
The Lea Manufacturing Co., Waterbury, Conn.
The Leonard Co., St. Louis, Mo.
Melson Industrial Supply Co., Grand Rapids, Mich.
Metal Goods Corp., Denver, Col.; New Orleans, La.;
North Kansas City, Mo.; St. Louis, Mo.;
Dallas, Texas; Houston, Texas
Mid States Industrial Corp., Rockford, Ill.
Vic Minor Co., Toledo, Ohio
O'Donohue Sales Co., Milwaukee, Wis.
Paints & Lacquers, Inc., Chicago, Ill.
Plastic Paper Co., Los Angeles, Calif.
Porter Paint Co., Louisville, Ky.
Protective Prod. Distributors, Hamburg, N. Y.
R. W. Renton and Co., Cleveland, Ohio
Hugh Russell & Sons, Ltd., Montreal, Can.
Scobell Chemical Co., Rochester, N. Y.
Sprayway Co., Los Angeles, Calif.
Suppiee-Biddle-Stoltz Co., Philadelphia, Pa.
(Industrial Division)
Tanner and Co., Indianapolis, Ind.
Tri-State Spray Equipment & Compressor Co.,
Omaha, Neb.; Rock Island, Ill.
In Europe:
Jenson & Nicholson, Ltd., London, Eng.

all parts are guaranteed against electrical or mechanical defects. The panels are products of The Op-Al Electric & Mfg. Co., 809 N. Senate Ave., Indianapolis 2, Indiana.

Electric Laboratory Mixer

An explosion proof laboratory mixer called "Lightnin" has been developed. This portable mixer has a motor approved by Underwriters Laboratories for Class I, Group D, and Class II, Groups E, F, and G service. It is especially designed for these service classes.

The mixer is recommended for simple fluid mixing, blending, solids suspension, gas dispersion and in connection with mass transfer and heat transfer studies. It can furnish accurate data for determining scale-up relationships. It clamps on the rim of any vessel, or may be clamped to a separate support. It adjusts easily to any desired angle.



Has explosion-proof motor; weighs 22-lbs.

For detailed information write Mixing Equipment Co., Inc., 135 Mt. Read Blvd., Rochester 11, N. Y.

Vacuum Metallizing Coatings; (Under-Coats and Top Coats)

The following excerpts from a letter to Industrial Finishing by Standard-Toch Chemicals, Inc., 2600 Richmond Terrace, Staten Island 3, N.Y., refer to new developments in connection with a timely subject:

"You have noticed the growing interest in vacuum metallizing. Articles on this subject are appearing more frequently in trade magazines, including *Industrial Finishing*. We notice that your readers are also inquiring about sources for metallizing equipment as well as metallizing coatings.

"We feel that we should acquaint you with our position in metallizing coatings. Our original research on coatings goes back about three years, to the time when only a small number of metallizing units were in operation. We did some basic research in this field and, by cooperating with equipment manufacturers, such as National Research Corp., Consolidated Vacuum Corp., and F. J. Stokes Machine Co., we have contributed a great deal toward making the technique of vacuum metallizing practical for industry. Coatings such as we have developed are vitally important to the success of metallizing . . .

"Since your publication is frequently asked for advice regarding sources of metallizing coatings, may we suggest that your readers be invited to contact us for samples and technical assistance? The enclosed Technical

"Lacquers are our baby . . ."

"I was frankly amazed..."

We needed a lacquer that would have to stand up under unusually severe conditions. Yet, we were in a production-cost squeeze. That's when we called in The National Chemical and Plastics Co. They came up with the answer in no time at all!"

There are many stories like this in finishing circles. And NCP is usually a part of the happy ending. You see, we supply superior quality lacquers of all types, for every purpose, to some of the largest users in the industry, showing them the way to product-improvement and production-economy. We can do the same for you.

If you use lacquer finishes it will pay you to write, wire, or phone for an NCP representative. Do it today.

THE NCP National CHEMICAL AND PLASTICS COMPANY

1432 Philpot Street Baltimore 31, Md.

Bulletins will give you an idea to what extent we have gone into this specialized field, and you will also observe that we have coating systems for all types of plastics and metals . . . "

On the introductory page to the 13 bulletins Standard-Toch Chemicals sent, the following paragraph is of special interest:

"These coatings, as indicated, are used either as undercoats (to provide a smooth surface to accept the metal that is deposited) or as topcoats (to provide a protective film over the metal deposited). In some instances the same product may be used as both topcoat and undercoat . . . "

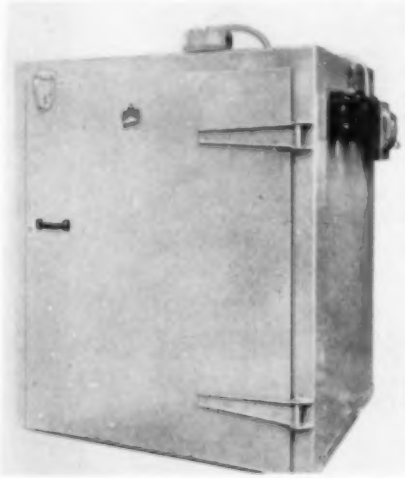
New Economy Industrial Oven

A new industrial baking oven has been placed on the market by Baron Industries, 241 West Ave. 26, Los Angeles 31, California.

Scientifically perfected for closely controlled production, the Baronet Industrial Electric Oven is especially designed to improve work quality and to provide greater operational economies in industrial baking processes.

Temperature uniformity is one of the features of the new oven.

Adjustable temperature controls and forced air circulation throughout the baking chamber, provide a constant temperature for the processing of many special types of paints and finishes. A high-powered, motor-driven fan draws fresh air into the heating unit through a controlled air intake. Here the air is heated to the indicated temperature before being forced into the baking chamber, where it is then circulated in a definite air-flow pattern. Volatiles, moistures and impurities are carried out of the chamber through a positive exhaust control. Because of these many added features, baking exactness is insured, over or under baking is eliminated and baking process time is substantially reduced.



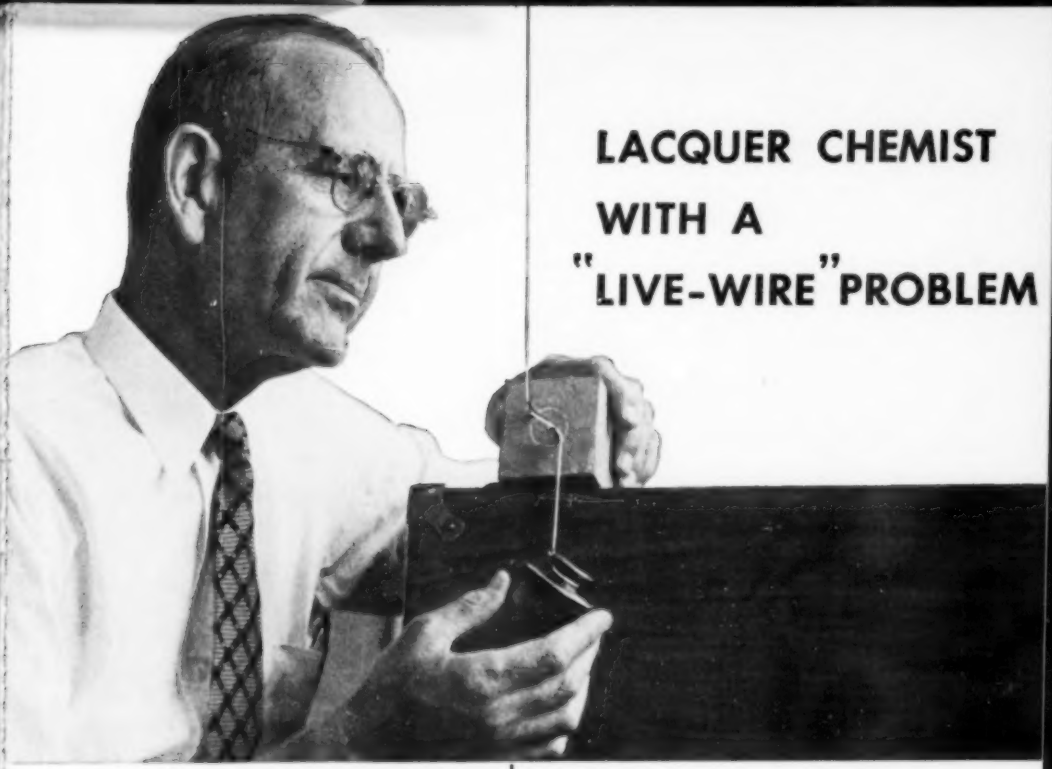
Inside of the oven is 42-in. wide, 36-in. deep and 52-in. high. Heats up to 500° F.

Treated Tissues Clean And No-Fog Glasses

The Carhoff Co., 11706 Kinsman Road, Cleveland, Ohio, announces No-Fog cleaning tissues. These chemically treated tissues are used for cleaning and no-fogging eye glasses, goggles, glass in welders head and hand shields, gas masks, windshields and glass equipment in laboratories. Suitable for use on glass or plastics. They may be used several times, and will not scratch the finest glass.

Stainless Steel Pump

A new type of stainless steel pump is announced by Vanton Pump Corp., Empire State Bldg., New York, N. Y., manufacturer of the patented flex-i-liner corrosion resistant plastic pump. Incorporating the unique features of the standard Vanton self priming design, which eliminates stuffing boxes,



LACQUER CHEMIST WITH A "LIVE-WIRE" PROBLEM

Ferbert-Schorndorfer's Chief Lacquer Chemist, Charles M. Hayes, is scrutinizing the condition of the lacquer-coated braid on a communications wire . . . after a hundred-cycle abrasion test.

A practical scientist, "Charlie" takes nothing for granted when it comes to lacquers. He has formulated and tested custom coatings for thousands of products . . . from fishing poles to automobiles . . . during his 33 year-career in the lacquer business.

Ferbert-Schorndorfer has benefited by Charlie's knowledge and experience for 26 of these years. It is, therefore, little wonder that so many big-name manufacturers rely upon F-S lacquers where maximum durability and protection are vital.

Charlie Hayes is typical of the men who help to keep F-S standards at top level in the paint industry.

For the best in product finishes, write to:

THE FERBERT-SCHORNDORFER COMPANY

A DIVISION OF AMERICAN-MARIETTA COMPANY

12815 Elmwood Ave. F-S **Cleveland 11, Ohio**

gaskets and internal check valves, the new S series permits pumping of a wide variety of chemicals.

Since the only parts in contact with the fluid are the stainless steel body block and the corrosion resistant flexible liner, these pumps are particularly adaptable for extreme corrosive service.

New Rustproof Treatment

A new rustproofing chemical treatment for iron and steel products is announced. Parts treated by this process are said to withstand standard salt spray tests 12 times as many hours as those treated by standard phosphate coating methods. Materials essential to this process became available for non-defense use early this year.

Called Endurion, the new immersion treatment for rustproofing can now be applied in integral colors from gray and black through blue, green, and olive drab.

For further information write Rust-Proofing and Metal Finishing Corp., 75 Commercial Ave., Cambridge, Mass.

New Clear Lacquer Developed For Brier Pipes

A new clear lacquer developed by Maas & Waldstein Co., 2130 McCarter Highway, Newark 4, N.J., Chicago and Los Angeles, was specifically formulated for use on pipes made of brier and other commonly used woods. The lacquer, designated as Clear Smoking Pipe Lacquer No. E814, gives an extremely high gloss, while retaining the appearance of the natural wood. In addition, the lacquer has the high heat resistance needed to withstand smoking pipe temperatures.

The lacquer flows easily, and can be applied by spinning the pipes in front of spray guns. It provides an attractive appearance and protects the pipe without the use of paint, which, particularly on the stem, might be objectionable to smokers.

This lacquer is expected to have other applications on wood products where it is desirable to retain the natural beauty of the wood, while increasing its heat resistance and gloss. Full technical information is available from Maas & Waldstein Co.

Safe Cleaning Tank

A new foot-treadle fire-preventive dip tank for washing castings, parts, assemblies and similar moderate size pieces is announced by Protectoseal Co., 1920 S. Western Ave., Chicago 8, Illinois.

The dip tank is waist high for convenient use without bending. It may be placed safely beside the worker or

Step on treadle to raise and hold up lid.

When E. J. Boyle, Inc., wanted a perfect finish for its famous AETNAWALL *office partitions . . . the unchallenged choice was . . .*

Randolph
COLORED LACQUER

E. J. Boyle, Inc., a division of Aetna Steel Products Corporation, manufactures Aetnawall, considered the finest in prefabricated hollow metal walls. For this leading, long-established concern, Randolph produces a superior finish — lacquer available in a variety of distinctive colors. This finish provides a rich, attractive sheen that helps create the heavy demand for these partitions in modern offices. Its quick-drying features are essential to fast-moving production, and the handling of rush orders, large or small.

E. J. Boyle, Inc., is one among a large variety of firms that depend on Randolph for specially-formulated, highly suitable and serviceable surface coatings.

Consult Randolph to get a finish that makes *your product* look, wear — and sell — better!

RANDOLPH PRODUCTS CO.

DEPARTMENT B

CARLSTADT, N. J.

DOPES LACQUERS ENAMELS THINNERS

at any other location in the plant where it is most convenient.

The hinged cover is self closing; the tank remains covered to protect the cleaning solvent from fire, contamination, and evaporation. It can be used only while weight is on the treadle. When pressure is released, the cover closes quickly. The tank is 13-in. wide, 24¾-in. long and 8¾-in. deep; it holds 8 gallons of cleaning solvent. It is approved by Factory Mutual Fire Insurance Companies Laboratories.

New Vapor Degreaser

Recently introduced Manpro B-121 vapor degreaser provides quick thorough vapor cleaning with one compact unit. Dirty parts or assemblies can be made clean, warm and dry in less than 50 seconds. Some of the features are two vapor controlling condensers, large work clearance, a divided tank to provide boil sump and spray pump sump, pressure spray and the Manpro Bar-L unit which has two safety thermostats.

Manufactured by Manufacturers Processing Co., 1360 Hilton Road, Detroit 20, Michigan.

Economical; no fire or health hazards.

Quick Setting Glue for Wood

A new quick setting industrial adhesive, Colpres 10-B, has been developed for the furniture and woodworking industries by Timber Engineering Co., research affiliate of National Lumber Manufacturers Association.

Colpres 10-B is a two part, urea resin adhesive for hardwoods, softwoods and plastic-to-wood laminates. In only ten minutes after the clamps are applied, glue joints develop a shear strength, in dense hardwoods, of about 500-lbs. per square inch. This is normally sufficient to permit removal of the clamps and start machining. Near ultimate strength is reached in 24 hours when a shear strength of about 3500-p.s.i. is generally obtained. The glue is odorless. For further information write to Timber Engineering Co., Dept. C-10-B, 1319 18th St., N.W., Washington 6, D. C.

Silver Ink for Dark Surfaces

A new silver ink with exceptional brightness and opacity, designed to afford greater contrast when printed on black and other dark materials, is announced. It is used in various printing and imprinting machines.

Among the products on which the silver ink is used are fiber containers, cartons, slab rubber, building siding, sponge rubber, and plastic sheet material, rubber impregnated and twill fabrics.

More information about the ink, known as No. 3-P-0972 may be had from Adolph Gottscho, Inc., Hillside 5, New Jersey.

Save! **6 out of 12 steps in paint handling with...**

ALEMITE VERSATAL PUMPS

Speed paint line production...
cut spoilage, mismatching...slash costs
...avoid fire hazards!

Downtime with idle crews standing by—hand mixing of small batches—lack of uniformity and mismatching leading to rejects and refinishing—danger of fire—all these problems and more are licked by a full circulating system powered by an Alemite Versatal Pump.

Versatal Pumps are *powerful*—deliver up to 27 gallons per minute! Require less maintenance, too. Self-adjusting piston is self-oiling. Open frame design separates pump from air motor—eliminates fouling. Available with 4¼" or 6½" motors in 22 different models.

FREE!

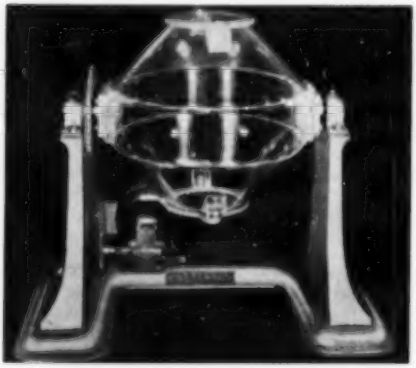
A booklet of ideas on how Versatal methods save time and money, help solve your production problems. Write Alemite, Dept. L-103, 1830 Diversey Parkway, Chicago 14, Illinois.

A PRODUCT OF SW STEWART WARNER

ALEMITE *Versatal* SPRAY-PUMP EQUIPMENT

Laboratory Dry Blender

A laboratory dry blender designed for research and development of a wide range of blending problems is now available.



Container is 12-in. in diameter.

Made of clear, rigid plastic, the L-P Blender provides the opportunity of studying effects of changes in blending time, effects of changes in consistency of raw materials, density differences, effects of size and shape of particles, general nature, such as adherence of particles to each other or to blender walls, etc.

This blender is complete with its lightweight aluminum frame and integrally mounted motor drive.

For further information write The Patterson Foundry & Machine Co., East Liverpool, Ohio.

Color Range of Enamel for Styrene Increased

Rez-N-Lac, a fast-drying enamel especially formulated for coating or decorating polystyrene, can now be obtained in a wide choice of bright colors, according to an announcement by Schwartz Chemical Co., Inc., 326 W. 70th St., New York 23.

In addition to its expanded line of 15 transparent and opaque stock colors, the firm will custom-mix to meet the exact color requirements of polystyrene fabricators. The high-gloss enamel is also available in clear and white.

Rez-N-Lac can be applied by spray or brush. The enamel is said to contain a substance which alters the polarity of the Polystyrene surface so that complete and permanent adhesion results. Because of the mild solvents used, it will not craze or soften even the thinnest polystyrene sections, according to the maker.

Weatherproof Sealer Coating

"Protex-Oil" is a specially formulated "sealer" to give protection to almost any type of surface. It can be used on metal, brick, concrete, wood, stucco, plaster and all types of composition wall boards; may also be used as wall size, primer, sealer, rust preventive, bronzing liquid, paint extender and weather-proof coating.

For further information, write Adelphi Paint & Color Works, Inc., 86-00 Dumont Ave., Ozone Park 17, New Jersey.

"Firzite" for Finishing Fir

Referring to some recent inquiries that Industrial Finishing received about a material called "Firzite," the United States Plywood Corp., 55 W. 44th St., New York 36, N.Y., wrote the Editor as follows:

". . . Briefly, Firzite is aimed at the three evils of finishing fir plywood and other soft woods; grain raise and hairline checking in paint jobs, and unsightly 'wild grain' when applying stain. There is both clear and white Firzite. The uses of clear Firzite are many, such as for natural wood finishing or prior to staining.

"White Firzite, being pigmented, in addition to sealing the wood, acts as

A Automobiles and Accessories
B Baby Furniture
C Clothes Hampers
D Doll Carriages
E Electric Appliances
F Farm Equipment
G Gas Tanks
H Heaters
I Ice Boxes
J Jacks
K Kitchen Cabinets
L License Plates
M Machinery
N Novelties
O Office Fixtures
P Playground Equipment
Q Quonset Huts
R Rubber Footwear
S Stokers
T Trucks—Trailers
U Unloaders
V Ventilators
W Wood Furniture
X X-Ray Machines
Y Yachts
Z Zoning Paints

A TO Z

For 78 years the top quality of O'Brien Industrial Finishes has been proved in American industry. Our constant research and broad experience can be of benefit to you—whatever product you make. The O'Brien Corporation, South Bend 21, Indiana.

O'BRIEN

INDUSTRIAL Since 1875 FINISHES

an undercoat over which only a minimum number of finishing coats are needed. And, for the popular blond and pickled effects on soft and hard woods, White Firzite—either white or tinted with colors-in-oil — makes an ideal finishing material.

"Firzite is distributed by us through our 60 odd branches to wholesale channels only . . . "

Siliconized Witch Oil

The Mitchell - Bradford Chemical Co., 2446 Main St., Stratford, Conn., announces the development of Siliconized Witch Oil.

It is a rust preventive that gives extra protection and better lubricating qualities to steel parts. A silicone surface promotes better water repellency. When applied over a black oxide, phosphate or other type of finish, greater corrosion resistance is assured. This oil is ideal for protecting work in process, or while the steel is in finished parts storage.

Colored Plastic Tape For Traffic Markers

Development of a new, tough, pressure sensitive tape, to meet the severe service requirements of marking floor areas and overhead limits in industrial plants, has been put on the market by the Permacel Tape Corp., New Brunswick, N.J., manufacturer of Texcel and Permacel pressure sensitive tapes.

Permacel 32 Colored Plastic Tape is unaffected by ordinary solvents, acid, grease, oil, water or alkalies. Its quick sticking qualities make it easy and quick to put down, direct from the roll. The extreme toughness gives it longer life than ordinary tape or paint. It comes in any desired width and in three colors, white, red or yellow.

Suggested uses include, marking machine areas, marking aisles, safety markings for pillars and low overheads, indicating traffic flow, placement of parked cars or stored items, and many others.

Sander-Polisher Attachment

Announcement is made of the Du-Fast Universal Model UN-12, orbital motion, portable sander that fits any make ¼-in. electric drill.

Fits any ¼-in. electric drill; orbit motion.

Operating at double the rpm speed of the drill used, it produces fast and efficient work. It employs orbital motion; has a working surface of 3 2/3-in. x 7-in., and uses a standard size 3 2/3-in. x 9-in. sandpaper.

For further information, write Du-Fast, Inc., 32 E. 4th St., New York 3, N. Y.

NACE to Meet at Birmingham

Birmingham, Ala., has been selected as the place at which Southeast Region, National Association of Corrosion Engineers, will hold its 1953 fall meeting on November 12.

When you can SEE the difference . . . IT'S TOO LATE!

Prime with STANTITE!

One switch box was primed with Stantite, the improved wash primer, before top coating; the other was not. Exposure discovered the difference and proved Stantite's strong resistance to corrosion and rust creep. And after years of research in Stanley laboratories there are other differences you can see right off . . . Stantite handles easier; it's easier to mix and easier to spray. Add these advantages to its excellent adhesion to all surfaces and its adaptability to most top coats. The result: a wash primer that insures your finish. For full details about spraying Stantite and clear Stantite for dipping write Stanley Chemical Co., 41 Berlin Street, East Berlin, Connecticut.

STANLEY

Industrial Coatings

STANLEY CHEMICAL

LACQUERS SYNTHETICS JAPANS ENAMELS

Random Comment on the Industrial Scene

(Continued from page 8)

known as Kalitex is an embossed vinyl plastic sheet in a distinctive burlap weave pattern.

The clear vinyl sheeting, in 54-in. width, is produced by the Bakelite Division of Union Carbide & Carbon. The transparent sheet is embossed and color-treated on the back-side by the Kalistron Division of United States Plywood Corp. and The Mengel Co.

The color range includes such popular shades as blue-green, gray-green, wine, tan, sunshine yellow, gray and light coral.

* * *

Pencil Size Magnet. The new GS magnet, made of super-magnetic alloy offers lifetime permanence through a single pole magnetic process. Assemblers and inspectors find the unit useful to test coated surfaces for magnetic properties of the under material.

The unit can be carried in the pocket; is no larger than a fountain pen; is mounted in a fiber non-conductive case with a pocket clip; length 6¼-in. One model is ¼-in. in diameter; another, ⅜-in. in diameter.

* * *

More Aluminum. Keen Johnson, V.P. and director of public relations, Reynolds Metals Co., told the National Association of Aluminum Distributors, meeting at Colorado Springs, that "The horizon of tomorrow has an aluminum lining. The day is rapidly approaching when you can get all the aluminum you can sell, due primarily to the fact that there has been a big increase in the production of the metal. The expanded facilities, the new reduction plants built by primary producers are getting into production. The day when you can be sure of getting aluminum in the quantities you want is not far distant."

Mr. Johnson said that production of primary aluminum in the United States increased 475% between 1939 and 1952, and that more than 4000 new peace-time uses for aluminum have been developed. Aluminum production in 1952, on a volume basis, was greater than the combined production of copper, zinc and lead, Mr. Johnson pointed out.

* * *

Screen Process Convention. Many important technological advances which vitally affect the progress of the screen process printing industry will be shown at exhibits planned for the fifth annual convention of the Screen Process Printing Association, International, Nov. 1-4, at the Hotel Statler, New York City.

Exhibitors will occupy the entire 18th floor roof top of the Statler while the hotel's mezzanine will be devoted to an art exhibit of work produced by SPPA members. Admission to the roof will be open to convention registrants and their guests; the new mezzanine show will be open to the general public.

A large assortment of new machinery, including improved presses will be shown in operation. . . . A one-man squegee produces 24-sheet posters. Until the development of this squeegee, two operators were required. Several fully automatic presses that do a complete screen job will also be in operation.

Many new pieces of drying equipment, designed to accelerate drying and eliminate cumbersome racking, will also be shown.

In the ink field, luminous inks, both of the daylight fluorescent and phosphorescent types, will be on display.

For Dust Free Finishes!
BOND TACK CLOTH

IN ROLLS
Cut off any size piece to use as needed.

IN BULK
Cut and folded. Ready to use.

STAYS SOFT AND TACKY
A SPECK-FREE FINISH EVERYTIME

Now Available in Rolls or Cut Bulk—White or Gold. In Three Different Types of Cloth

Get your Tack Cloth packed just the way it's easiest for you to use . . . either in 150 yard rolls of 36" wide cloth or in handy cartons . . . 100 or more Tack Cloths to the carton.

No matter which way you buy it, you can be sure that every square inch will stay SOFT and TACKY until the very last bit is used up!

The Cut Bulk size is 18" x 36" . . . folded to 4½" x 18" for ease of handling. ALL BOND TACK CLOTH is **Spontaneous Combustion Proof, Lint-Free** and **Wax-Free.** Gives a sparkling speck-free Finish **every time.** Clean and sanitary. **No waste.**

TRY THEM and COMPARE RESULTS.
Samples Gladly Sent Upon Request.

BOND CHEMICAL PRODUCTS CO.
"The Tacky Wiper Specialists"
2641 N. CLYBOURN AVE. CHICAGO 14, ILLINOIS

Also Individually Packed in Glassine Envelopes—144 to the Carton

A Warranty of Satisfaction in Every Carton

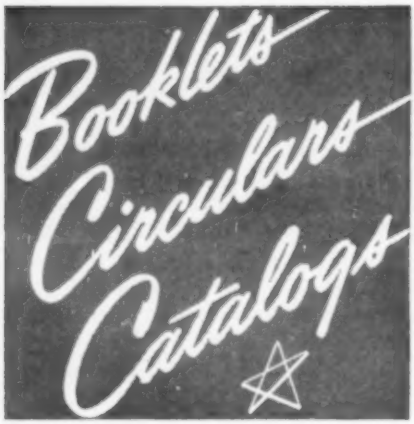
NEWCOMB-DETROIT

PIONEERS IN ENGINEERING, MANUFACTURE AND INSTALLATION OF

INDUSTRIAL OVENS
SPRAY BOOTHS
PARTS WASHERS
DUST COLLECTORS
AIR SYSTEMS

ESTABLISHED 1912
DETROIT DIVISION – GRAND RAPIDS DIVISION – NEWCOMB INDUSTRIES LTD., WINDSOR DIVISION

For Bulletins and Quotations, Wire, Write or Call—
NEWCOMB-DETROIT
5753 Russell St.,
Detroit 11, Mich.
TR 3-2100



New Silicone Catalog

A comprehensive listing of silicone products, together with 15 new products ranging from adhesives to molding compounds, is included in a catalog published by Dow Corning Corp., Midland, Michigan.

The catalog describes each silicone in terms of what it does. It also contains a cross reference index to locate the product and the purpose for which it is used.

Industrial Chemicals Folder

A valuable 4-page folder listing various industrial chemicals is now available. This easy to read folder shows each product in a definite group, the physical properties of each and its use in industry.

Every laboratory should have this information packed folder. For a free copy write on your letterhead to Commercial Solvents Corp., 260 Madison Ave., New York 16, N. Y.

Vinsynite, Metal Pretreatment

An actual sample of Vinsynite, a metal pretreatment used in metal finishing and maintenance, is included in a new set of literature released by Specialty Coatings, Inc. division of Thompson & Co., Oakmont, Penna.

The set comprises three pieces, one containing an actual specimen of the product applied to a panel of mild steel. Sections of this panel show graphically how Vinsynite combines pretreatment with the deposition of a thin organic film, thus providing both excellent adhesion and resistance to corrosion.

The other pieces illustrate Vinsynite in use on a wide variety of products and outline the simplified, low-cost application methods by ordinary brush, spray, dip, flow or roller. Also, included are test data showing how Vinsynite stands up under salt spray and distortion tests.

Degreaser Catalog

A catalog on vapor degreasing has been released by Currier Co., Inc., P. O. Box 126, Oakland 4, Calif. The catalog includes information on degreasing and shows the standard sizes as well as the low cost Drum Major line. Also included are special degreasers designed for specific jobs.

The catalog is illustrated with typical examples of these units including specifications. It will be supplied free on requests received on company letterheads.

Hand Pushed Trolleys, Cranes

Jervis B. Webb Co., 8951 Alpine Ave., Detroit 4, Mich., announces publication of a new catalog on Hand Pushed Trolleys, Cranes, and Switches. This Catalog, No. 453, is 8½ x 11-in., includes 16 pages and cover. It is attractively printed in two colors, and contains complete specifications on the above equipment. It should be of interest to companies requiring a mechanical method of handling products intermittently where the cost of a power driven trolley conveyor might not be justified.

Masonry Coating Brochure

Masonry surface coatings based on Bakelite and Vinylite resins for extended service life, reduced maintenance costs and beauty of appearance are described in an 8-page brochure, "Bakelite and Vinylite Resin Coatings for Masonry."

Useful on concrete, stucco, cinder block, brick, plaster and porcelain surfaces, coatings based on vinyl resins, Bakelite phenolic resins or Bakelite polystyrene latex, resist the effects of varying weather conditions as well as most acids, alkalies and other chemicals, food stuffs, oils and greases.

Copies of this brochure (VC) may be obtained by writing to Bakelite Co., 300 Madison Ave., New York 17, N.Y.

Metal Cleaning Folder

The Detrex Corporation has published a special technical folder on its new Sonicleen Process, the application of ultrasonic energy for the cleaning of metal parts.

Illustrated by graphs and diagrams, the folder describes the principles and methods used in this process. The transmittal of sound energy through a solvent results in "a direct impact upon the overall surface of a submerged piece of work, thereby affording a cleaning action previously unobtainable except by hand wiping," according to the folder.

Radio frequency generators up to 5-kw. and larger are incorporated in the units.

RONCI SPEEDIP WHIRL ENAMELER

Made in Two Sizes, R-100 and R-200 Capacity 312-cu.in. and 1206-cu.in.

IDEAL FOR LACQUERING AND ENAMELING SMALL PARTS UP TO 7-IN. IN LENGTH

CUTS COSTS, SAVES UP TO 80% OF MATERIAL

Carries up to 75-lbs. per load, and up to 30 loads per hour can be coated with lacquer or enamel in these machines.

All operations are within the machine. Dipping tank is raised, submerging the parts in the basket, and then lowered and the parts whirled, throwing off excess material. No additional outside tanks required; no cleaning necessary when changing colors; no loss of material.

Prompt Deliveries

Write for further information and submit samples to be coated.

RONCI MACHINE COMPANY

A Division of F. Ronci Co., Inc.

2 ATLANTIC BOULEVARD CENTREDALE 11, R. I.

Get Better Baked Finishes in GEHNRICH Recirculating Ovens

Gehnrich Recirculating Ovens—truck, rack or conveyor types; gas, electric, oil or steam heated — are built to meet your specifications for output, quality, economy. What's your oven problem?

W. S. ROCKWELL COMPANY
2783 Eliot St., Fairfield, Conn.

BOOKS On Finishing Available

"MODERN ORGANIC FINISHES—Their Application to Industrial Products" (452 pages) new $8.50

"CHEMICAL FORMULARY" (Vol. IX) 7.50
(Preceding Volumes also available, same price)

"FINISHING METAL PRODUCTS"—2nd edition (352 pages) 6.00

"PRACTICAL FURNITURE FINISHING" (112 pages) 1.75

"FURNITURE FINISHING" (543 pages) 5.00

"SPRAY PAINTING"—Industrial and Commercial (169 pages) 2.50

"COLOR IN DECORATION AND DESIGN" (232 pages) 3.00

"THE MIXING OF COLORS AND PAINTS" (292 pages) 3.00

"WOOD FINISHING" (361 pages) 3.00

"NATIONAL PAINT DICTIONARY" (704 pages) 10.00

"MODERN POLISHES AND SPECIALTIES" (313 pages) 7.50

"GRAINING"—Ancient and Modern (224 pages) 5.00

"THE SILK SCREEN PRINTING PROCESS" (225 pages) 5.00

"SCREEN PROCESS METHODS OF REPRODUCTION" (252 pages) 4.00

"THE SCIENCE OF WRINKLE FINISHING" (204 pages) 5.00

"THE SCIENCE OF MODERN WOOD FINISHING" (386 pages) 6.00

"PAINT & VARNISH TECHNOLOGY" (509 pages) 8.00

"METALLIC AND NON-METALLIC COATINGS FOR GRAY IRON" (76 pages) 1.75

"PAINT FILM DEFECTS — Their Causes and Cure" (544 pages) 12.00

"INDUSTRIAL SOLVENTS" (764 pages) 12.00

"FINISHING MATERIALS AND METHODS" (320 pages) 4.00

Cash Must Accompany Order—
Send for Descriptive Circular

INDUSTRIAL FINISHING
1142 N. Meridian St. Indianapolis 4, Ind.

depending on the sound intensity and the time cycle required to obtain the desired cleaning result.

The Soniclean process can be applied to non-absorbent materials such as metals, glassware and molded products. It will remove soils such as buffing, lapping and honing compounds and iron oxide residues.

Copies of the folder are available from Detrex Corp., Box 501, Detroit 32, Mich.

Protective Zinc Coatings

Zinclate, an excellent protective coating for iron, steel and aluminum products is described in a new illustrated brochure just published by Industrial Metal Protectives, Inc., 401 Homestead Ave., Dayton 8, Ohio.

Available in six basic formulations, Zinclate may be applied by spray, brush, dip or flow coat methods to new products or to existing structures.

The brochure contains information on this protective coating and shows several typical applications in varied fields. Copies are available without cost by writing the company.

Articles on Viscosity

The Brookfield Engineering Laboratories, manufacturer of the Brookfield Synchro-Lectric Viscometer, as part of its service to industry, has reprinted a variety of articles and other technical papers relating to viscosity and related subjects. These technical papers have been described and classified in an "Article Reprint Request Sheet" so that readers may note quickly and easily which papers may be of assistance to them and request those desired by their item number.

If interested, write Mr. Richard Minard, Technical Service Dept., Brookfield Engineering Laboratories, Inc., Stoughton, Mass.

New Cellulose Acetate Book

A new 32-page, 8½ x 11-in. addition of a basic technical booklet about the properties and uses of cellulose acetate is now available from Hercules Powder Co., Wilmington, Delaware.

In the section devoted to discussions of properties, the material has been revised to include data on the many new solvents, plasticizers and resins which are used with cellulose acetate.

The section on uses includes much new information about acetate specialty lacquers including starting formulas for clear and pigmented outdoor lacquers, heat resistant paper lacquer, greaseproof wallpaper lacquer, plastic coatings, and dipping lacquers.

Other information in the book also has been revised and brought up to date.

Everything
For Wood Finishing

QUALITY

SINCE 1888

H. BEHLEN & BRO., INC.

EAST COAST
10 Christopher St.
New York 14, N. Y.

FACTORY
Kearny, N. J.

WEST COAST
1755 Berkeley St.
Santa Monica, California

The NAZ - DAR Company

461 Milwaukee Ave.

Chicago 10, Ill.

HOW TO SAVE MONEY!

I DO SILK SCREENING OF SOME TYPE IN MY PLANT. TELL ME HOW I CAN IMPROVE THE QUALITY OF MY REPRODUCTIONS USING NAZ-DAR WEATHER - PROOF SILK SCREEN ENAMEL.

NAME .....

FIRM .....

STREET .....

CITY ..... ZONE ..... STATE .....

THINNERS

LOW COST!

- **ASK FOR QUOTATIONS**
- **FORMULATED TO MEET ANY SPECIFICATION.**
- **QUALITY AND UNIFORMITY GUARANTEED.**

Shipped in Tank Cars, Tank Wagons, Drums or 5 Gal. Cans.

Specialists in Thinners for the Leather Trade.

Low Cost Volume Blending and Drumming Service on Contract.

Write or Phone for Prompt service and deliveries.

ELL-BEE CHEMICAL CO., INC.
HANOVER, N. J.

Phone—WHippany 8-0194

I'M AN EFFICIENT GUY TO HAVE AROUND!
Economical Detroit Handy "Tac" Rags are prepared for you, and always ready for instant use. Removes dust, lint and sand particles from metal, wood and plastic surfaces before painting. Never dry out or harden. Guaranteed performance.
Immediate delivery from your supplier
Improved
DETROIT
HANDY "TAC" RAG
NON INFLAMMABLE

Standard of the FINISHING INDUSTRY *Since 1934*

DETRO MFG. & SALES CO., CULVER CITY, CALIFORNIA

Non-Sparking Copper Tools

The advantages of beryllium copper tools as a safeguard against accidental fire or explosion, caused by sparks, are described in an illustrated folder just issued by The Beryllium Corp., Reading, Penna.

An outstanding feature of beryllium copper is its non-sparking property, making it safer than steel for use in such places as refineries, gasoline storage depots, paint spray booths, hydrogen tanks and lines—any place where inflammable gases, liquids or dusts are handled or processed.

In addition to the non-sparking factor, beryllium copper tools are also non-corrosive, have unusual hardness and strength, and they resist wear.

Oily Floor Problems Booklet Offered Free

A new manual that explains the causes and cures of oily floor problems has been published. Entitled "How to Solve Oily Floor Problems," the brief (about 30 minutes' reading time) yet comprehensive discussion covers every major aspect of oily floor maintenance: safety from fire hazards; safe movement of personnel and products; safe operation of machinery; prevention and correction of floor damage and deterioration; maintenance cost comparisons; and many others. Tested techniques for the efficient use of Oil-Dri absorbent and Oil-Dri All Purpose absorbent in each of these applications are presented in detail, supported by actual "case histories" from Oil-Dri users.

Free copies of the new manual are available on request, by writing Oil-Dri Corp. of America, 520 N. Michigan Ave., Chicago 11, Illinois.

Plant Layout System Saves Drafting Time

A free bulletin tells how conventional plant layout procedures, which entailed high cost and many man-hours of drafting, are now replaced with a low-cost plant layout system involving the use of photocopy. Through the use of this system, one large manufacturer completed a job involving over 2 million square feet of floor area with a saving of 2720 man-hours of drafting time.

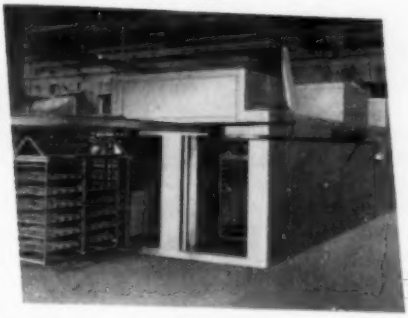
The system consists of making floor plans on specially white-surfaced aluminum plates, drafting scaled templates, representing machine tools, conveyors, etc., stationing templates on the aluminum plate with double sided adhesive tape, then reproducing negative and positives of completed plate with a Magic Hand vacuum-bed printer.

Copies of this bulletin are free on request from Peerless Photo Products, Inc., Shoreham, Long Island, N.Y.

Engineered FOR Maximum Savings

in baking and drying

YOUNG BROTHERS OVENS



Wherever heat treating applications are required, standard or specially engineered Young Brothers Ovens will effectively improve production and save money. Their use in leading plants, for over 50 years, has proven their outstanding efficiency and economy. Batch and conveyor types for BAKING — DRYING — HEAT-TREATING — CURING — DEHYDRATING and many other processes. Write for Bulletin 2 today.

Continuous monorail conveyor paint baking oven

YOUNG BROTHERS CO.

1835 Columbus Road
Cleveland 13, Ohio

Estab. 1896

COMPLETE FINISHING SYSTEMS DESIGNED AND INSTALLED

Distributors for . . .

Binks Spray Equip.
Quincy Compressors
Burdett Ovens
Richards-Wilcox Conveyors
Chainveyor Conveyors
J. B. Webb Conveyors
Bede Heaters and Airless Atomization
Sundstrand Sanders
Detroit Sanders
Ionic Electrostatic Equip.
Graco Pumps
Blakeslee Degreasers

ENGINEERING SALES & SERVICE

Our men are trained and experienced finishing production sales engineers. We maintain a complete service, parts and repair division. Plans and estimates furnished on request.

HOVEY SPRAY EQUIPMENT COMPANY

63rd & Vine Sts. **Philadelphia 39, Pa.**

Serving the East Exclusively

Industrial FINISHING Editorial

Uniformity of Finish in Cold Weather

Unfortunately the temperature in the finishing room cannot always be controlled. This is often true of plants located in the north during the cold months, and especially where only low heat, if any, is maintained through the night and over week ends. For example, let us consider a factory that operates only on the day shift. In the morning the shop is cold; also the product and the paint. The length of time they will remain cold depends upon the efficiency and capacity of the heating system—and the outside temperature. But let us assume that by ten or eleven o'clock the temperature of the room and the products have come up to about 74° or 76° F. It is safe to say that with violent fluctuations in temperatures the quality of finish cannot be uniform.

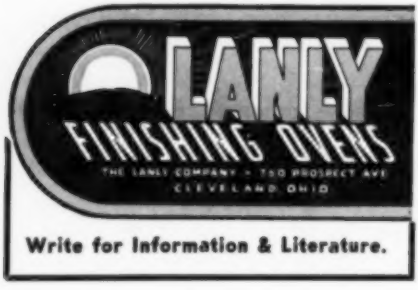
With some exceptions the same condition may exist in shops where finishing room temperatures are uniformly controlled. For instance, to preserve a definite conveyor loading pattern, some products may have to be taken from a storage bank. Products coming through the power washer and dry-off oven are still warm when they reach the spray painters, but those parts taken from the storage bank are cold. Again, uniformity of finish is not possible.

While it is not always possible to keep the finishing room, the products and the paint at temperatures of 74° to 78° F., it is possible to overcome the heat fluctuation in products and paint. Simply install a paint heater in the line between the paint supply tank and the spray gun. Heating the paint to a uniform temperature will help to keep its viscosity uniform, and it will make possible the application of more paint or lacquer solids with each stroke of the spray gun.

Product temperature can be controlled from the start of the shift, on an extremely cold morning, by having the work move through a warm-up oven (perhaps an infrared setup) just before it reaches the spray booth. All parts hanging from a conveyor can pass through this short oven to raise their temperature to whatever surface heat is desired.

If either or both the paint heater and the warm-up oven are installed, the supplier of finishing materials should be consulted, as this new set of conditions will probably call for a change in formulation, or at least in the amount of solvents contained in the material.

These improvements are not too expensive and they can be installed regardless of the physical layout of the finishing room. If correctly and consistently operated, a uniform finish will result, all else being equal.



Write for Information & Literature.

Mac's FASHION CRISTALITE
LACQUERS and SEALERS

Are especially formulated for the light blonde or bleached finishes. They are "water white" and do not impart any color to the surface.

They have high solids content and produce excellent body. They will not mar or scratch readily and can be sanded in one hour.

Mac's Cristalite Lacquers are available in various sheens.

Write for samples and descriptive folder.

The Lawrence-McFadden Co.

Headquarters for Fine Finishes Since 1875

7430 STATE ROAD *"Our 78th Year"* **PHILADELPHIA 36, PA.**

PHOTOGRAPHIC **silk screens**

FINE LINE OR HALFTONE. FOR ALL TYPES OF SURFACE DECORATION OR MARKING GLASS, METAL, TOYS, VITREOUS PRODUCTS, INSTRUMENTS, ETC.

WOOD GRAIN **silk screens**

30 DIFFERENT PATTERNS

MATCHED, BUTTED OR INLAY EFFECTS

ART AND PHOTOGRAPHIC SERVICES

HANSMAN STUDIO

2850 W. Fullerton Ave. Chicago 47, Ill.

Users Expect Service On New Equipment

"If some of these manufacturers' representatives would give us one-tenth as much attention after we buy and install their equipment, as they did while they were selling us, we would be happy." So declared one of the executive personnel in a concern that uses modern equipment to paint its products on a mass-production basis.

This concern is some distance from what we refer to as big industrial areas, but it makes and sells a considerable volume of products fabricated of steel. It is a progressive pioneering outfit with a good reputation.

The management investigated, purchased and installed a new type of equipment. This new equipment worked fine and the users were enthusiastic about it, but eventually one part, at a vital spot, wore out or ceased to function properly. Result: Some "down time" in the painting department—a bad situation for everyone concerned. And a bad time for a visitor to come along, especially if he happened to come there to see the new type of equipment in operation and report on its performance and its publicized advantages.

The maker of the equipment, far removed from the scene and depending upon a territory representative, has declared that a new part could have been installed in ten minutes, and this would have restored everything to maximum efficiency. Fine, but the user didn't have the spare part nor any instructions about how to service the job. He had to go back to using his older type of equipment which, fortunately, he had kept in reserve for possible emergencies.

Let's give some consideration to service after the sale of the machines, tools and other equipment that we have spent so much time and money developing, promoting and selling, especially if it is a new type of apparatus with which the user's workmen may not be familiar.

If the user is expected to service new equipment, let's help him with printed instructions, accompanied by diagrams or drawings if desirable, and advise him about keeping on hand certain spare parts for possible replacement. Also, if the customer isn't too remotely located or if it isn't too impossible, let's see that a representative calls on him two or three times a year, or at least once a year. Let's keep him sold on what he has purchased; keep him happy. After all, satisfied customers are excellent publicity and valuable assets. They may buy more of what we have to sell—and they can be instrumental in influencing others to buy.

TOMORROW'S Products Tested TODAY

A service to aid industry in producing longer-lasting and better-looking products. Quick predetermination of durability and permanency by actual exposure test in South Florida. Write us today for full information.

SOUTH FLOR!DA TEST SERVICE
EST. 1931
4201 N. W. 7th St. Miami 34, Fla.

PAINT MIXER

MIRACLE 5 GALLON
PAINT REJUVENATOR

All paint restored to original consistency without opening the can.

2 minutes per gal.

MIRACLE PAINT REJUVENATOR COMPANY
128 E. 10th St., St. Paul 1, Minn.

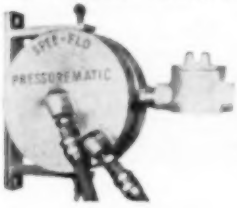
Hot Spray FINISHING ASSURES ABSOLUTE QUALITY CONTROL!

..and a Better PRODUCT!

WITH

ONE SPRAY METHOD
ONE CONTROLLED VISCOSITY
ONE STANDARD OF QUALITY

. . . regardless of humidity or room temperature!



Model 300-A

UL APPROVED

for fixed installation $99.50

SPEE-FLO Pressurematic HEATERS

SPEE-FLO HEATERS
For Fixed or Mobile Applications

Priced from

$99.50 to $319.50

The SPEE-FLO CO.
720 Polk Ave.
HOUSTON, TEXAS

THE SPEE-FLO CO., **Dept. IF-10, 720 Polk Ave., Houston, Texas**
Builders of practical industrial and automotive hot-spray equipment

Please send me information on your line of hot spray heaters best suited to our work. Type of products being finished .....
Application is conveyorized ..... turntable ..... mobile ..... other .....
Average volume of material per gun per hour .....
Type of material ..... Please have representative call .....
Name .....
Company .....
Address .....
City ..... State .....

About Paint Stripping

MODERN SCIENCE has created many new and complicated finishes. For quick stripping of such finishes, certain firms have made a wide range of materials to quickly strip any paint from anything, anywhere. For economy of material and labor it pays to follow the recommendations of the manufacturer. They are the result of careful research and experience.

Both alkali type and solvent type strippers should be stored in a cool dry place and the containers should be kept closed. Tanks filled with solvent type stripper and provided with covers should be closed when not operating, to prevent evaporation.

Although it is not absolutely required, agitation in the immersion process increases the efficiency of some strippers. Find out from your supplier just what kind of agitation is permissible or which is recommended. Otherwise you may be in for trouble.

For certain types of strippers, heat can be used and where this is desirable it will speed up the operation of paint stripping. Follow temperature instructions carefully. Do not use heat unless it is specified by the manufacturer of the stripper.

An effective paint stripper must be chemically powerful. Protection of the body, good ventilation and fire precautions, where indicated, make for production efficiency.

Call on your supplier's technical representative and use his experience. He will be glad to go over the work

NOW-SURFACE FINISH HAND TOOLS...
from Rough Glaze to Mirror Reflecting Surfaces
CLAIR
MODEL 206-A
SURFACE FINISHING MACHINE
FLAT OR CONTOURED PRODUCTS SURFACE FINISHED WITH PRECISION

Wrenches, pliers, screw drivers, ax heads—these and other hand tools can be surface finished most efficiently with a Clair Machine. The Model 206-A, specifically developed for this type of service, is equipped for either magnetic or mechanical holding fixtures. Providing a working surface 38" wide and buffs from 3" to 12" in diameter . . . this versatile machine operates on a principle thoroughly proved in many surface finishing operations.

Write for details!

CLAIR MANUFACTURING CO., INC.
Specialized Machine Equipment For Glazing and Polishing Operations
OLEAN, N. Y.

TACK RAGS *Now Individually Packed*

In Glassine Bags

- For Convenient Handling
- Keep Clean in Storage
- For Easy Stock Control
- Lower Cost Through Control of Size of Piece Used.

NEW "DUSTIX" TACK RAG—Picks up and grabs dust, lint, dirt particles, steel wool, sand. Always ready for use—remains soft and tacky indefinitely—spontaneous combustion proof—no fire hazard.

Write for sample, prices and
ATTRACTIVE QUANTITY DISCOUNTS

MODERN 1ST AID NECESSITIES COMPANY
INDUSTRIAL DIVISION
737 W. RANDOLPH ST., CHICAGO 6, ILL.

Spe-de-way
WOOD BLEACH

This Single Operation, Controllable, Patented Bleach

★ REQUIRES NO NEUTRALIZATION
★ LEAVES NO DEPOSIT
★ DOES NOT RAISE THE GRAIN
★ WILL NOT WARP THE THINNEST OF VENEER
★ LEAVES WOOD NEUTRAL

ECONOMICAL — CONTROLLABLE — DEPENDABLE

Gallon Unit makes two gallons of solution. Application by spray or sponge.
Wood ready to finish in less than one hour. Delivered prices quoted on request.
Distributed throughout the U.S.A., Canada and foreign countries by leading Industrial Finishing Material Suppliers.

Mfrd. By
Spe-de-way **Products Co.**
3639 No. Columbia Blvd. Portland 17, Oregon

Chicago Warehouse Stock Location
Griswold & Bateman Whse. Co., 1525 Newberry Ave.—Canal 6-2770
Eastern Canadian Representative—H. A. Scarlett Industries, Ltd., 510 King St. E., Toronto 2.

in your plant, take your problem samples to his company's laboratory for analysis, and bring back an individual laboratory report. There may be no charge or obligation for this service.

Information in this article is based on what appeared in Octagon Facts, published by Octagon Process, Inc., Staten Island 1, N. Y.—Editor.

PEARL ESSENCE

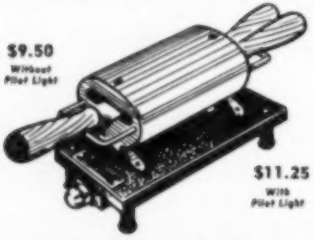
"Astralucine Brand"
Produces a high luster
on a variety of finishes

Write for your free copy of our informative Technical Bulletin
"Pearl Essence Finishes"
—what they are and how to use them.

Argenta Products Co.
EASTPORT, MAINE

No String Tied To This—

If You Use OP-AL



Patching Knife Heater
STANDARD FOR OVER 25 YEARS
Sold By All Leading Jobbers

OPAL THE OP-AL ELECTRIC AND MANUFACTURING COMPANY
809 N. SENATE AVE. - INDIANAPOLIS 7, IND.
Phone: Lincoln 0250

John Rowe Is Appointed V.P. of Binks Mfg. Co.

Binks Mfg. Co. announces the appointment of John E. Rowe as Vice President in charge of Industrial and Public Relations.

Prior to his new appointment Mr. Rowe was assistant to the president, Mr. Burke B. Roche. Government Contracts and Advertising were his special responsibilities then. These activities will remain under his supervision.

Mr. Rowe joined the Binks Mfg. Co. in October, 1935. Shortly after Pearl Harbor was bombed, Mr. Rowe opened Binks' Washington, D. C. office to expedite the company's role in supplying spray painting equipment for the armed services and war industries. In 1943 Mr. Rowe joined the Navy, and served until V-J Day, at which time he was a Lieutenant Commander.

Getting back into civilian life, Mr. Rowe took up his sales activities again for the company in 1947 and returned to his home town, Chicago, as a member of the Home Office staff, handling sales and advertising, as assistant to the president.

R. E. Sagendorf Advanced in Detrex Corporation

The Detrex Corp. of Detroit, major manufacturer of industrial metal-cleaning equipment and chemicals, announces the appointment of Rodney E. Sagendorf as administrative assistant to W. F. Newbery, director of sales.

For two years, Sagendorf has been chief of the Chlorinated Solvents section, Chemical Division, of the National Production Authority in Washington, D. C.

Sagendorf joined Detrex as Manhattan representative in 1942. He was loaned to the government for four years during the war, attached to office of the Chief of Ordnance in Washington and Detroit. He returned to Detrex in 1945 to become expediter for the company's purchasing department. Later he was placed in charge of the general sales office, and then became the company's Ohio representative for two years.

A new product of *SHERWIN-WILLIAMS* Industrial Research . . .

New, WATER-reducible enamel
cuts fire hazards . . . retains top film properties

- **REDUCES FIRE HAZARDS during application and storage**
- **ELIMINATES EXPENSE for reducers . . . requires only water**
- **REDUCES PAINTING FUMES and ODOR**
- **PROVIDES CONVENTIONAL FILM PROPERTIES**

One of industry's biggest problems—the fire hazards present during application of conventional finishing materials—now can be reduced or eliminated.

Sherwin-Williams Water-Reducible Enamel—a product of extensive research and experience in industrial emulsions—utilizes only *water* as a reducing agent. It will not burn, in liquid form, at normal room temperatures, nor during spray or dip application, even if exposed to open flame. It produces a very hard gloss finish with properties equal or superior to conventional organic solvent enamels. Cured film is not water soluble.

Water-Reducible Enamel is available in black for finish of machine or metal parts of all types—can also be supplied in colors. Contact your Sherwin-Williams Industrial Representative for details, or write The Sherwin-Williams Co., General Industrial Division, Cleveland 1, Ohio.

SHERWIN-WILLIAMS

INDUSTRIAL FINISHES

Solvent Lab. Protected By Automatic Fire Ex.

PROTECTION of lives and property against loss or injury was the primary consideration of the designers of the Solvents and Thinners Test Room at the El Segundo Laboratory of the California Research Corp. After lengthy consideration, the management came up with a plan that provides maximum safety for the four men who carry on experiments to improve paint thinners, dry cleaning agents and similar products. In addition, the equipment installed lends positive assurance against severe damage to valuable testing apparatus and the lab itself in case of fire occurring when the lab is unoccupied.

The 24x38-ft. room contains modern lab equipment and open storage racks for highly flammable solvents and liquids. Even though safety is a byword in the lab, its manager knew that the use of flammable liquids, combined with oxygen and an ignition source, spelled potential danger.

Accordingly the company asked experts to design and install an automatic fire extinguishing system which would operate immediately in case of fire, provide positive extinguishing action, employ an agent that would not damage any valuable test apparatus, and leave no mess to be cleaned up following discharge.

The new fire extinguishing system uses inert carbon dioxide gas which meets every specification. Six 75-pound cylinders, located in the lab's basement, store the pressurized fire-

Easy DOES ALL THE JOB . . .

SANDING - RUBBING - POLISHING
ALL MATERIALS
WOOD - METAL - PLASTIC - SLATE

Try it!

Model J-R Air $69.50

Model DF Electric

Model AF Air

For working hard to get at areas, simply adjust sanding pad up to 1½" either side.

DETROIT *Easy* FINISHERS
3 MODELS . . . AIR OR ELECTRIC

TRY EASY - the sander that's easy on workmen - that *does all the job* - 3 to 5 times faster! TRY EASY's *adjustable sanding pad* for getting down behind drip moldings (see sketch), bumpers, other hard to get at places. *EASY STRATE-LINE ACTION-TOPS* for scuffing-sanding primer surfacer, WET or dry-waxing, polishing! ***Ask your jobber or write for new catalog sheet.***

DSM DETROIT SURFACING MACHINE COMPANY

1268 East Eight Mile Road
Detroit 20, Michigan

smothering liquid. Should fire flash, temperature - rate - of - rise detectors mounted on the lab's ceiling and in both exhaust ducts automatically trip the cylinders of carbon dioxide. The released liquid, under its own pressure, rushes through piping and is discharged as an inert gas into the room and exhaust ducts from Multijet nozzles in sufficient volume to reduce oxygen to a degree insufficient to support combustion. The fire is virtually strangled.

The system, which also can be manually actuated by a pull box located on the wall just outside the lab's exit door, employs several pressure operated switches for the securing of all test equipment.

When the carbon dioxide passes through the piping these switches are forced to close. Immediately all electrical circuits to the room are secured; ventilation motors stop, and alarms sound. A test switch also is available to test the automatic electrical alarm circuit.—*Kidde Industry, Published by Walter Kidde & Co.*

J. T. Lester, Southwest Mgr. of Devoe & Raynolds Co.

Devoe & Reynolds Co., Inc., announces the appointment of J. T. Lester as South west District Manager, to succeed C. H. Asel who has been forced to resign because of ill health.

Jimmy Lester joined the Devoe organization in September, 1939, when he was 20. During his 14 years of service, Jimmy has graduated through the ranks from his original position of truck-driver to the present position of District Manager of the important Southwest District, with headquarters in Dallas.

The position of Manager of the Devoe unit at Miami previously held by Mr. Lester, is to be taken over by Mr. J. Leo Loyd, formerly salesman in the Miami area.

AGATEEN

LACQUER No. 2B

A Jeweler's Clear Lacquer for all precious metals. Engraves without feathering, shearing, cracking, chipping or flaking.

Used by the country's leading manufacturers of buckles and men's jewelry.

Famous for ADHESION, DURABILITY and MILEAGE.

No samples. Minimum orders accepted.

Agate Lacquer Mfg. Co., Inc.
Serving Industry Since 1927
11-13 43rd Road
Long Island City, N. Y.
Stillwell 4-0660-1

AGATEEN
THE LAST WORD IN QUALITY

Power Graining Machine

1. Cycle time 25 seconds.
2. Will cover a surface up to 31" x 80".
3. Automatic roll cleaner.
4. Cuts production costs.

AMERICAN RICHWOOD PRODUCTS CO.
Graining Plate Division
104 E. Mason St., Milwaukee 2, Wis.

Kelly Joins Cosden Paint Co.

The Cosden Paint Co., Beverly, N. J., manufacturer of industrial finishes, announces the appointment of Mr. A. K. Kelly, as its sales and service representative for Northern Pennsylvania, New Jersey, and Southern New York.

With 18 years experience in the technical service and sales in the custom built coating field, Mr. Kelly is well qualified to cope with any problem that may arise. Mr. Kelly resides at 208 Hazelwood, Bound Brook, N. J.

C. R. Anderson Personnel Man For Rinshed-Mason Co.

Clyde R. Anderson has been appointed Director of Personnel and Industrial Relations of the Rinshed-Mason Co., Detroit manufacturer of automotive, industrial and architectural paints. The Detroit plant of Rinshed-Mason employs over 500 people. Other manufacturing operations are located in Anaheim, California and Windsor, Ontario, Canada.

Anderson, who has a B.S. degree from Kansas State University, supplemented by an educational background in law and engineering, has acquired over 13 years experience in personnel work. He is active in the Industrial Relations Association, and a director of the Northwest Detroit Executives club.

SPPA Convention Nov. 1-4 In New York City

The fifth annual convention of the Screen Process Printing Association, International, will be held in the Hotel Statler, New York City, November 1-4.

Joseph J. Grossman, president of the organization, declares that "Never before in the history of our industry has so much attention been focused on screen process and the services it offers to display advertising and to industry. Over 5000 members of the graphic arts field are expected to attend the meetings and exhibits.

Exhibitors include photographic film manufacturers, producers of printing machines, papers, inks and drying equipment, as well as the art exhibit work produced by members of SPPA. H. (Red) Motley, president and publisher of Parade Magazine, will address the luncheon meeting at the Statler on Nov. 2.

Part of the working committee beaming in anticipation of the forthcoming world-wide S.P.P.A. (Screen Process Printing Association, International) Convention scheduled to take place at New York's Hotel Statler, November 1-4, 1953.

Standing, left to right: Harry Jay, J. I. Biegeleisen, and Joe Ulano. Holding the blackboard: Frank Stark, Chairman, and Joe Grossman, President of the S.P.P.A. Further to right, Leonard Gorelick, Herb Prince. Seated: Virginia Sebastian, Jules Chayte, Doris Michaels.

DRUM TUMBLING MACHINE

Illustrated is one of several machines for rolling and/or tumbling standard steel containers of all capacities: To mix your finishing materials in suppliers' drums; to avoid fire hazard of open drums; to avoid contaminating one product with another; to avoid cleaning of equipment between mixes; to avoid delays—material is ready when needed; drums can be tapped without removing from tumbler; portable ramps permit fast insertion and removal of drums.

Hundreds of these machines are in constant use by the country's largest plants.

Send for Literature!

THE VOL-U-METER CO., P. O. BOX 54, BUFFALO 16, N. Y.

Schaefer Opens New Office And Studio in Salamanca

The Schaefer Varnish Co., Louisville, Ky., manufacturer of industrial finishes, announces the opening of a branch office and customers' service studio, 15 Rochester St., Salamanca, N.Y.

Mr. Alrick Berggren has joined Schaefer, and will be in charge of service work and color design in the new studio. Mr. Berggren has had more than 25 years' of experience in the finishing industry.

Mr. M. L. Hoover and Mr. F. A. Chichester, both eastern sales and service representatives for Schaefer, expect to speed their customer service through the complete facilities of the new studio.

Little Opens Office In Chicago

Arthur D. Little, Inc., industrial research and engineering firm of Cambridge, Mass., will open an office in Chicago. It will be located in Room 3832, Board of Trade Building, Chicago 4.

The company is expanding its activities in the midwest. This office will maintain a staff to carry out technical-economic, technical-audit and market-research surveys. John R. Kirkpatrick, a native midwesterner, will be Manager.

Write for Catalog of

Paint Testing Apparatus

GARDNER LABORATORY

Bethesda 14, Md.

Adsit Joins Central Solvents

John N. Adsit, formerly general manager of a company in Cincinnati, has joined Central Solvents & Chemicals Co. of Chicago as a sales and technical representative. Mr. Adsit has had wide experience in solvents and chemicals, having represented the Celanese Corp. of America in the past. He graduated from Pennsylvania State University in 1948 with a degree in Chemical Engineering.

Mr. Adsit is a member of the Paint, Varnish & Lacquer Association of Detroit; a member of the Allied Chemical Industries of Michigan; and a member of the American Chemical Society.

Aerosol Pressure Packaging

Self Spraying Touch-Up Enamels and Lacquers for use by your dealers and distributors to cover nicks, mars, and scratches, using your own production finish or touch up paint. Laboratory facilities available for sample processing.

For details write:

PLASTI-KOTE, INC.

425 Lakeside, N. W. Cleveland 13, Ohio

CVC QUALITY

Custom Finishes for METAL

Engineered to solve your problems. Write for full facts.

Quality Custom Finishes Since 1865

CINCINNATI VARNISH CO.
CINCINNATI 12, OHIO

Serving **THE SOUTHEAST**

- LACQUERS
- SEALERS
- FILLERS
- TONERS
- GLAZES
- PIGMENTED WIPING STAINS
- NGR STAINS

Complete Technical Service At Your Disposal

SNYDER BROTHERS COMPANY

Manufacturers of Quality INDUSTRIAL LACQUERS

P. O. BOX 548 — TOCCOA, GEORGIA

CLASSIFIED ADVERTISING

The rate on ads appearing in this department is $1.00 per .line of 6-pt. light face type, per insertion. Minimum charge, $5.00. Ads set in 8-pt. extra bold face type cost $2.00 per line, per insertion.

SALESMAN WANTED

To carry an additional line of lacquer thinners and wash solvents for industrial and automotive accounts. Address IF-157, care Industrial Finishing.

FURNITURE FINISHES SALESMAN

For state of California with headquarters in Los Angeles. Experienced in selling and servicing lacquers and synthetics. Excellent opportunity for right man with progressive California manufacurer. Base salary plus commissioon and expenses. State age, experience and education. Address IF-148, care Industrial Finishing.

FURNITURE FINISHING SUPERVISOR.

Large furniture manufacturer has immediate opening for man with wide experience all phases of operating finishing department with 35 to 50 people and 12 spray booths. DeVilbiss equipment.

Line is medium priced, mostly modern. Location, Texas. Write full details age, education, experience, past employment and salary expected.

Splendid opportunity for right man with ability in old, well established firm. Address IF-149, care Industrial Finishing.

SALESMAN.

Opportunity for increased earnings, a better future, and greater security is offered by manufacturer with years of experience and increased production capacity in asphalt, gilsonite, and varnish blacks; japans or enamels; aluminum finishes; varnish finishes. Will also make finishes to customer's specifications. Liberal Commission or profit-sharing method of compensation on volume business with protected territory. Full time or part time. All replies considered strictly confidential. Write THE EXCELSIOR VARNISH WORKS, INC., Cleveland 2 Ohio. Established 1890.

LACQUER SALESMAN.

Medium-size Lacquer Plant (near Boston) wants salesman for complete line industrial lacquers and synthetics. Must have had experience. Car necessary. Territory, New England. Address IF-151, care Industrial Finishing.

SALESMAN WANTED.

Industrial Finishes Department of National concern in Los Angeles area. Experience preferred in Can Coatings and Metal Decorating field. Write, giving age and background of education and experience. Address IF-150, care Industrial Finishing.

SALESMAN WANTED

Metrop. N. Y., N. J., Conn. territory. Finishing systems, including booths, ovens, washers, conveyors, paint equipment. Exclusive agreement. Commission, based gross profit. Full engineering and office assistance. Only man experienced in this equipment and territory considerd. Address IF-152, care Industrial Finishing.

WANTED.

CHEMISTS for plants at Kearny, N. J. and Lafayette, Ind.
SALESMEN for various locations.
Apply in confidence to personal attention O. J. S. deBrun, President, THE EGYPTIAN LACQUER MANUFACTURING COMPANY, The Americas Building, Rockefeller Center, New York.

WANTED.

Southern sales representative. Freedom to travel large territory. Outstanding service department, national advertising, recognized quality products, retirement plan, attractive contract for right man. Prefer man with industrial following. Address IF-153, care Industrial Finishing.

SALESMAN WANTED.

We have an opening in Ohio for a salesman of industrial finishes of all types. If you are an established salesman and are thinking of making a change, we would like to hear from you. Address IF-154, care Industrial Finishing.

WANTED.

Capable stain and filler formulator and stylist; able to shade as well as develop. Plant located in Chicago. Give full details in reply. Address IF-143, care Industrial Finishing.

FORD CUPS

THE VOL-U-METER COMPANY

Buffalo 16, N. Y.

Refinishers and Small Shops

We specialize in filling orders for small amounts of quality finishing materials and supplies. Send for our catalog.

GASTON FINISHES

P. O. Box 446-IF, Bloomington, Indiana

WANTED TO BUY.

Will buy your dirty Thinners and Solvents. Send samples or letters giving approximate contents and solids. Address THE JOHANN CO., 8547 S. Ashland Ave., Chicago, Ill.

WANTED.

White Overspray or Sludge—will pay top prices. Address IF-155, care of Industrial Finishing, Indianapolis 4, Ind.

WANTED TO BUY.

Gas-fired batch-type baking oven. Minimum size 6x10-ft., not less than 7-ft. high. Must be in operating condition. HAHN ELECTRIC CO., P. O. Box 3848, Kirkwood 22, Missouri.

FOR SALE.

Fostoria Even Ray Infra Red Paint Oven. New. Still in original shipping case. Three independent sections totalling 22-ft. adaptable for ceiling mounting. Originally sized for 1-quart size containers. Wired for maximum load 72KW, estimated load 45KW. For additional information write: M. J. Schulz, DUTTON-LAINSON CO., Hastings, Nebr.

INDUSTRIAL EQUIPMENT FOR SALE.

Complete paint finishing system designed for 8400-lbs. or 7000-sq. ft. of material per hour. Consists of wash-bonderize unit, dry off oven with Ross oil-fired heater, water wash spray booth, air make-up system, enamel baking oven, and monorail variable speed conveyor. Also, complete automatic pickling machine and vitreous enamel furnace. Address IF-156, care Industrial Finishing.

FOR SALE.

Four (4) used Ransohoff Burnishing Barrels. Excellent condition. Specifications: tumbling chambers, 36" long (each unit), 36"—37½" high; screen size, ⅜"; ball separating chamber, 60"; one is neoprene lined, three are wood lined. Each has 5-HP, AC Motor and Reeves variable speed drive. F.O.B. our plant, subject to prior sale. Very reasonably priced. KILGORE, INC., Westerville, Ohio.

DRUM CLEANING CHAIN

THE VOL-U-METER COMPANY

Buffalo 16, N. Y.

LOCAL WAREHOUSE STOCKS FROM COAST TO COAST

BLACOSOLV®

---stabilized NOT alkalized!

Continuous analysis of solvent samples is ended when you use Blacosolv. **Blacosolv** *is truly stabilized—use it and forget it. Over twenty years of performance records prove Blacosolv efficiency, economy and endurance.*

G. S. BLAKESLEE & CO.

Established since 1880. Manufacturers of solvent vapor degreasers —metal parts washers—Blacosolv degreasing solvent.

Write today for full information. Chicago: 1844 South 52nd Avenue, Chicago 50, Illinois; **New York:** 381 Fourth Avenue, New York City 16, New York; **Canada:** G. S. BLAKESLEE & CO. LTD., 18 Cranfield Road, Toronto 13, Canada.

INDEX *to Advertisers*

Advance Paint Co. ..... Front Cover
Agate Lacquer Mfg. Co., Inc. 121
Allied Finishing Specialties Co. 6
American Richwood Products Co. 121
Arco Co., The 37
Argenta Products Co. 118
Atlas Powder Co. 57

Bede Products, Inc. 1
Behlen & Bro., H. 109
Better Finishes & Coatings, Inc. 91
Binks Mfg. Co. 52-53
Blakeslee & Co., G. S. 126
Bond Chemical Products Co. 105

Capitol Machine Co., The 18
Carborundum Co., The 71
Cincinnati Varnish Co. 124
Clair Mfg. Co. 116
Classified Advertising 124-125
Clinton Co., The 77

Day & Co., James B. 75
DeBurgh Conveyors, Inc. 81
Despatch Oven Co. 12
Detrex Corporation ..... Third Cover
Detroit Surfacing Machine Co. 120
Detro Mfg. & Sales Co., Inc. 110
DeVilbiss Co., The 40-41
Dolan & Co., V. J. 5
DuBois Co., The 59
Du Pont de Nemours & Co., E. I. 64-65
Duralac Chemical Corp. 8

Egyptian Lacquer Mfg. Co., The 87
Ell-Bee Chemical Co. 110

Ferbert-Schorndorfer Co., The 95

Gardner Laboratory 123
Gasway Corporation 128
Gaston Finishes 125
Grand Rapids Varnish Corp. 2

Hansman Studio 113
Hovey Spray Equipment Co. 111

Industrial Systems Co. 51
Interchemical Corporation ..... Second Cover

Jamestown Finishing Products, Inc. 32
Jensen Specialties, Inc. 25

Kirk & Blum Mfg. Co. ..... Back Cover
Koch Sons, Inc., George 89

Lanly Co., The 112
Lawrence-McFadden Co. 113
Lilly Varnish Co. 10-11

Maas & Waldstein Co. 16
Mahon Co., R. C. 14-15
M. & E. Mfg. Co. 45
Mearl Corp., The 55
Miracle Paint Rejuvenator Co. 114
Modern 1st Aid Necessities Co. 117

National Chemical & Plastics Co. 93
Naz-Dar Co. 109
Newcomb-Detroit Co. 105
Nikolas & Co., G. J. 47

Oakite Products, Inc. 68
O'Brien Corp., The 101
Op-Al Electric & Mfg. Co. 118

Pelron Corp. 35
Perfection Paint & Color Co. 79
Peters-Dalton, Inc. 27
Pittsburgh Coke & Chemical Co. 13
Pittsburgh Plate Glass Co. 72-73
Plastic-Kote, Inc. 124
Potter Paint Co. 7
Pyroxylin Products, Inc. 69

Randolph Products Co. 97
Ransburg Electro-Coating Corp. 49
Reliance Varnish Co. 61
Reynolds Metals Co. 19
Rinshed-Mason Co. 20
Rockford Varnish Co. 82-83
Rockwell Co., W. S. 107
Ronci Machine Co. 107

Schaefer Varnish Co. 67
Schmieg Industries, Inc. 21
Shell Chemical Corp. 17
Sherwin-Williams Co., The 119
Snyder Bros. Co. 124
Solvents & Chemicals Group, The 39-63
South Florida Test Service 114
Spe-de-way Products Co. 117
Spee-Flo Co., The 115
Spruance Co., The Gilbert 9
Stanley Chemical Co. 103
Stewart-Warner Corp. 99

United Lacquer Mfg. Corp. 85
United States Spring & Bumper Co. 29

Varnish Products Co. 6
Vol-U-Meter Co. 123-125

Young Brothers Co. 111

GET AMAZING SAVING

WITH A *GASWAY*
CONTINUOUS METAL
CLEANING—TREATING—
ROLLACOATING LINE!

KoolVent of Indiana is one of the many companies making amazing savings using Gasway Continuous Metal Cleaning, Treating and Rollacoating lines. Two men operating this continuous system convert raw aluminum strip, from two inches to twelve inches wide, to finished recoiled stock at the rate of 42 lineal feet per minute. *Both sides are coated at the same time with different colors on each side.*

Saving on paint is another great economy. In this particular operation one gallon of paint covers about six hundred square feet of aluminum with a film .001 thick, the amount required for extreme durability. This coated stock is then roll formed after finishing, tremendously increasing the speed of finished part production.

GASWAY CORPORATION

Write today for the KoolVent story—
"How to Save by Coating Before Forming"

6463 N. Ravenswood Ave., Chicago 26, Illinois

give the GO-signal to DETREX for guaranteed metal cleaning

Only Detrex provides BOTH the chemicals and the equipment to do your metal cleaning operations. The benefits are obvious.

Through coordination of thinking in one competent organization, the most economical combination of equipment and chemicals can be achieved . . . considering both initial and operating costs. These results are guaranteed!

Whether solvent degreasing, alkaline or emulsion washing or even cleaning with sound waves is required, Detrex produces all the basic components . . . recommendations are not biased . . . quality control is complete.

Once installed, Detrex field engineers keep a watchful eye on the operation to assure top efficiency as long as you run the operation. They'll even train your operators.

It all adds up to team play from start to finish and that's a winning combination in any league. It's the very reason that statistics prove manufacturers, from coast to coast, prefer Detrex for their complete cleaning needs by two-to-one. You can get the whole story by spending a minute to fill out and mail the coupon at the left . . . we're confident it will pay you to do it.

for free survey

At no obligation to you, the Detrex field man in your area will come in and survey your present or proposed operations. There is no cost for the service. The result will prove to you the money-saving advantages of Detrex service. Just fill out and mail the coupon below . . . our field man will call you for the most convenient time to come in.

DETREX CORPORATION,
Dept. 409, Box 501,
Detroit 32, Michigan

Please have the Detrex man in our area make an appointment to survey our operations to point up ways of cutting cleaning costs.

NAME_____

COMPANY_____

ADDRESS_____

CITY_____ ZONE____ STATE_____

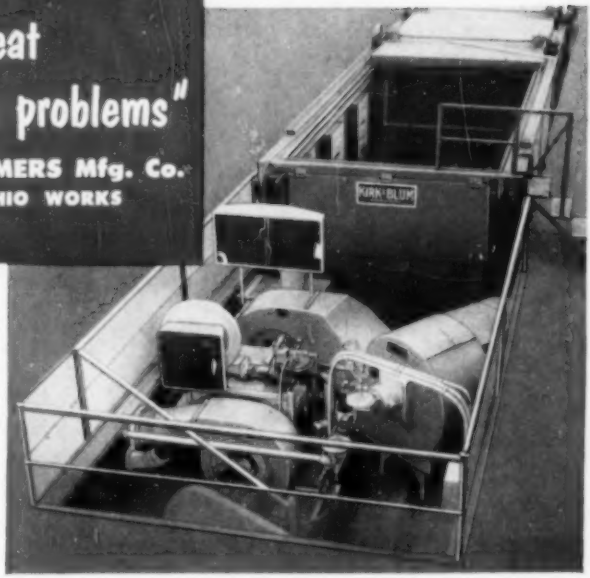
DETREX CORPORATION

DEGREASERS • DEGREASING SOLVENTS • WASHERS
ALKALI & EMULSION CLEANERS • DRYCLEANING
EQUIPMENT • PHOSPHATE COATING PROCESSES

KIRK and BLUM OVENS

"...put the heat on production problems"

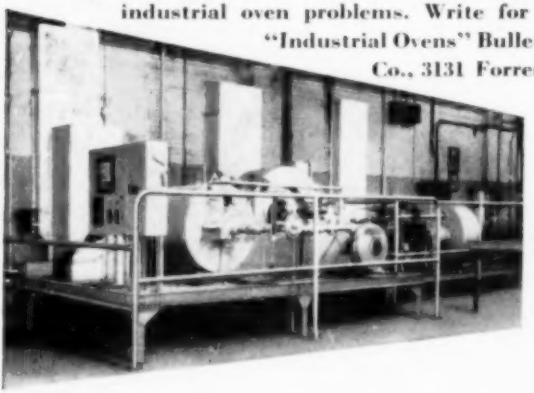
at ALLIS-CHALMERS Mfg. Co.
NORWOOD, OHIO WORKS



20-ton capacity rotor and stator varnish baking oven. Installed in a pit, this 300° F. oven is ten feet deep by fifteen feet long and twelve feet wide. It is loaded by shop crane.

Many Kirk & Blum Industrial Ovens are designed, fabricated and installed for specific production problems. Shown here are a few of the variety of K & B ovens which are used in electric motor manufacture at Allis-Chalmers Mfg. Company, Norwood, Ohio.

Put the 46 years of experience and skill of Kirk & Blum to work on your industrial oven problems. Write for complete information and "Industrial Ovens" Bulletin to The Kirk & Blum Mfg. Co., 3131 Forrer Street, Cincinnati 9, Ohio.



Heating systems for two batch type varnish baking ovens are located outside of the varnish dipping department to minimize hazards.

KIRK and BLUM
INDUSTRIAL OVENS